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## CRUDE RUBBER "ASSISTANTS."

TO one who has pondered over the history of the rubber business, it is patent that, wherever it has shown a crying need, human ingenuity, or accident, or both combined, have succeeded, at least in a measure, in supplying it. In the early "thirties" there were numbers of rubber factories in existence, with what were then large amounts of capital invested, all of which proved a dead loss, because the really beautiful goods produced were without any of the lasting properties now so common to India-rubber. It was then that Charles Goodyear discovered the united value of sulphur and heat, and made the rubber industry a success. After a few years, however, the prodigal use of pure rubber so caused its price to appreciate that there was need of another revolution, which came with an increased knowledge of the use of various adulterants and ingredients that made the rubber in many cases far better, and in all cases enabled it to go much further. This knowledge of compounding, however, reached its limit, and still the business grew. At the time when it was most needed, inventive minds took up the problem of recovering waste so successfully that as much recovered rubber is used in the United States to-day as there is Pará rubber. Not so successfully in this country, but very successfully in England, chemists took hold of the problem of oxidizing various oils and forming a semi-elastic substance, that compounded with rubber helped to keep its price down, and in a measure were helpful to the rubber compound.

To-day with the vast increase that the rubber industry is showing, and with a future full of promise for a vastly greater business, there comes the distinct call for some further process, ingredient, or compound, that shall serve to keep crude rubber down to a reasonable price. Numbers of sanguine souls believe that this definite call is to be answered by the reproduction of India-rubber itself, made synthetically. The conservative and hard-headed claim that this can be done only when miracles are performed; but it is interesting to know that more than one to-day claims to have accomplished this most desirable feat. One man, well along in years and apparently full of sincerity and honesty, has for two years past shown samples big and little to rubber-manufacturers, of a gum in which he claims there is not an ounce of genuine India-rubber, and yet which experts fail to distinguish from pure Pará rubber. His secret is based on the combination of certain ingredients by heat. Another, an expert electrician, places a certain amount of cottonseed-oil in a bottle, adds a mixture of certain liquids which he says liberate hydrogen, runs a loop of copper wire into this solution, seals the bottle, sends a mild current of electricity through the solution, and India-rubber slowly forms about the wire loop.

Now it is not a question as to whether the experimenters of to day, who claim to have produced pure India-rubber, are frauds or not. It is simply a problem that confronts our chemists who should be doing something to assist in a further upbuilding of the rubber business. The need is here. Manufacturers and dealers all appreciate it, and while we have not the faith to say that a gum equal to

Pará rubber in every respect can be produced in the laboratory, we do believe that better and more valuable rubber "assistants" may be brought out and that the readiness of rubber-manufacturers to look into every scheme that seems to point to this end, is what makes it most manifest.

## CREDIT AND THE MONETARY STANDARD.

THE study of the value of the dollar, in which the American people are now so deeply engaged, extends much farther than any mere consideration of what a given coin will actually buy to-day. It involves the whole theory of commercial credit, compared with which the volume of cash transactions, under conditions which prevail in the United States, may fairly be said to be insignificant. Whether one buys lands or houses or railroads, or stocks or bonds, or India-rubber or cloth or tea—whether one buys by the million or ton or by the yard or ounce—the most prevalent practice is not to pay cash. And the same is true whether labor or services or tangible commodities is involved in the transaction. Not even the plainest workingman is paid for his daily labor on the day on which it is performed. He awaits the convenience of his employer, as the investor of great sums awaits some agreed-upon time for the distribution of dividends. And when payment is made, in the one case or the other, it is more apt to be in some other form than in lawful money. All of which may be summed up in the assertion that credit transactions are far more extensive than those based upon spot cash. Hence the person engaged in any form of work or business to whom something is not owed—*i. e.*, who is not a creditor—is a very exceptional person.

So long as the standard of values is firm, and every man to whom a dollar or a million dollars are due can calculate to a fraction the value of what is coming to him, business engagements can be entered upon with confidence. But one can afford to dispose of neither labor nor goods without some assurance of the substantial value of what he is ultimately to receive for it. For even if lawful money does not change hands in the majority of cases, values of everything merchantable are for convenience sake expressed in terms of money, and there must be back of the whole system a form of money composed of material upon which the whole world sets a certain seal of value. Thus money serves a purpose as a measure of values in a field far exceeding in extent the aggregate of cash transactions, and may really be said to be needed mainly for the settlement of balances here and there—as between the bankers in a clearing-house, or between countries in international trade.

It is not with the idea of presenting any new consideration that these lines are written, but to point out that these truisms seem to be overlooked by many people in the discussion of the American monetary standard, the idea being expressed freely in some quarters that the commercial value of the material of which money consists is unimportant, so long as a particular mint stamp appears upon the coins. The question of the purchasing value of the twenty-five dollars which the average citizen has in his possession is comparatively unimportant; the real question is the effect which a change in the national standard of money would have upon the value of all the thousands of millions of property in existence, and the effect upon the redemption of the thousands of millions of debts, of every kind, of which some part, as already shown, is due to nearly every individual in the land.

IT IS PAINFUL to have to report indications of the end of the Peruvian revolution, for the reason that the rubber-planting enterprise which the Florida newspapers have been booming may be discouraged. We had learned via Jacksonville that, the forests on the Amazon having been destroyed by "all sorts of criminal wastes," "the world is looking elsewhere for its rubber supply." There might have been hope of finding rubber in Peru, but for the revolution there, due to the fact that "W. R. Grace and Charles R. Flint, of New York, are battling for the South American trade in the east and west sections of Peru," and thus was offered an opportunity for the magnates of the Standard Oil Co. "to flank them by planting the rubber-tree in Florida." But we don't see, after all, why the end of the revolution should discourage the plans to make "the trackless wastes of Florida" prolific. Let the Standard Oil Co. buy Peru from the impoverished government, float it down the Amazon, and spread it over the trackless wastes aforesaid, and there will be a plenty of rubber-trees in Florida, without waiting for them to grow from the seed. The complete removal of Peru, it seems to us, would be a more certain way of confounding Messrs. Grace and Flint than by planting rubber-tree seeds at Bay Biscayre, while Peru is left straddling the Andes, in full view of these competing merchants.

THE WOONSOCKET "CALL," published in a great rubber-manufacturing center, where the mills are now idle, advocates the free coinage of silver as a certain panacea for industrial stagnation. Addressing himself to the rubber-workers, the editor thus outlines his idea of what would follow the reopening of our mints to silver: First, the mine-owners would have their silver coined into standard dollars; secondly, they would buy increased quantities of supplies from the East, and "the first thing they require will be rubber boots, or rubber shoes, or leather boots;" further on, the rubber factories would send out "some of the stacked-up cases of goods, whose failure to find a market caused the factories to shut down." In brief, there would be more money in existence, more goods would be bought and sold, and everybody, including the farmers, would become more prosperous, and all through the use of "silver dollars worth 100 cents each." Hence, the editor asks, where does the "53-cent dollar" come in? The rubber-manufacturers of Woonsocket would speedily find out when they attempted to pay silver for the heavy cargoes of crude rubber which they are obliged to use every year. Their coin would be worth its price in the silver markets of the world, irrespective of the government stamp upon it. And if they should be forced to pay nearly two silver dollars for the crude rubber which now costs $1 on a gold basis, they would have to mark up their manufactured goods proportionately, so that their customers would find no real benefit resulting from the circulation of more silver dollars than at present. So far as the value of their dollars would be concerned, they would be in the position of the people of Mexico, where free coinage of gold and silver is unrestricted, and where one of the few gold dollars which have not been driven out of circulation there will buy as many goods as $1.90 in the silver coins of the country.

# HISTORY OF THE RUBBER INDUSTRY IN NEW BRUNSWICK, NEW JERSEY.

*By T. Robinson Warren.*

THE pioneers in rubber manufacture in the United States were E. M. Chaffee, and Charles Goodyear, of Massachusetts, Danial Hayward, of Connecticut, and Horace H. Day, of New Brunswick, N. J., together with John Helm and Henry G. Tyer, of the same place. Thus the interesting spectacle presented itself of four young men, Chaffee, Hayward, Goodyear and Day, poor, but with an abiding faith in their inventive genius, groping after the solution of a problem which, when discovered, would yield them wealth and fame.

As early as 1834 Charles Goodyear, the most enthusiastic of the four, had formed the most exalted ideas as to the value of rubber in manufacturing, and felt convinced that he would eventually discover a process which would overcome the obstacles hitherto insuperable. At last the hour had come when he was to reap the reward of all his toil and privation, and the story of the extraordinary circumstances to which he was indebted for the discovery of the process for "vulcanization" of the gum, or the production of what he then and there styled "elastic metal," is a household word among those engaged in the manufacture of rubber, and too well known to need repetition.

Meanwhile Horace H. Day had been experimenting in New Brunswick with the same end in view, in company with Helm and Tyer; indeed it is said that while yet a youth he used to spend much time in a drug-store on Burnet street, trying the effects of chemicals upon India-rubber, and subsequently took out several patents and did a large business in shirred goods, and in the old-fashioned rubber shoes, made partly of leather.

But Charles Goodyear's patent covered the process necessary to the manufacture of the shoe made entirely of vulcanized rubber or "elastic metal" and under it the Naugatuck Rubber Co. of Connecticut first began their manufacture. Of this company James P. Langdon was an employé and associated with Goodyear in many of his successful experiments; thus when, fourteen years thereafter, he was called to the superintendency of the New Brunswick Rubber Co., of which he became subsequently the secretary, the vice-president, and the president, he went there fully equipped.

In the year 1839 there came to New Brunswick from the eastward one Hiram Hutchinson, who had had some experience as a rubber worker, and who had learned some of the secrets of the manufacture; but he was entirely without means. He soon, however, became acquainted with Peter Onderdonk who, in partnership with Johnson Letson, was engaged in the retail hardware trade, and he induced Onderdonk to advance a few hundred dollars, to begin the manufacture of India-rubber in a small way. From its inception the undertaking was a financial success, and it grew rapidly to such proportions that Onderdonk, after learning the secret of manufacture, became unwilling to divide the profits equally with Hutchinson, who had no capital. He determined to "freeze out" Hutchinson, and notified him that he must either sell his own share, or buy Onderdonk's, the latter supposing of course that as the other had no money, he must perforce, sell. But Hutchinson, fully aware of his motive, and resolved not to be driven out of a business that he himself had created, went to John Aken and Jonathan Ackerman, residents of New Brunswick, whom he satisfied of the large profits accruing to the business, and induced to furnish the funds necessary to buy out Onderdonk's share. In doing this they "builded better than they knew," for their small investment made them both wealthy, Ackerman becoming a millionaire and a "rubber king."

The manufacture of India-rubber soon became an important industry in New Brunswick, attracting the attention of James Bishop, who had gone from this place to New York a few years before and established himself in the shipping business, and especially in the South American trade. Having been one of the earliest importers of Pará rubber, he eagerly watched the development of its manufacture. Becoming satisfied that it had a great future he induced his brother-in-law John R. Ford—at that time engaged in the retail dry-goods business in New Brunswick—to join with him in the manufacture of rubber, on a small scale. They commenced operations in an old mill belonging to the Bishop estate, on the site of the present village of Milltown, N. J., where is at present located the great establishment of the Meyer Rubber Co.

Horace Day by this time had built up a large business in the manufacture of shirred and other rubber goods, and in the old fashioned rubber shoes, which last, however, were quickly superseded by the vulcanized rubber shoe, made under the Goodyear patent. But Day, nothing daunted so far as the infringement of a patent went, began the manufacture of the new rubbber shoes, leading to innumerable and interminable suits for infringement. Indeed, Horace Day as a litigant had no peer, either as to the large amounts expended in carrying on the suits, or in the prominence of the counsel engaged to defend them, Daniel Webster, Francis B. Cutting, James T. Brady, and Rufus Choate being among them. Indeed, some idea may be formed of the extent of this litigation, when the testimony in a *single suit* in the United States circuit court in Trenton, in 1857, filled an octavo volume of 1360 pages, containing upwards of 500,000 words. This volume was popularly known as "Day's bible." The following extract from an advertisement printed in the New York *Evening Express* in February, 1852, is characteristic of the man:

LATEST DISCOVERY IN RUBBER.

Get a patent, honestly if you can, but get it. If other people make inventions which render your patent obsolete, useless, then get a reissue covering others discovery—it is not necessary that *you* should invent.

Swear strong; pay $5000, $10,000, $20,000, if necessary, to pay your agents to get a reissue, for when got, it will be valuable. . . .

Truth is not necessary; a bold falsehood is even better to uphold a fraudulent patent.

Traduce those whom you cannot buy or drive [and so on *ad infinitum*]. HORACE H. DAY.

Following the above was a list of the articles for sale at Day's store in Cortlandt street.

There was at one time in the employ of Horace Day, in the engine-room of his Dennis-street factory, in the capacity of greaser and stoker, a young German who, by reason of his steadiness, sobriety, and general aptitude, gradually won the confidence of his employer. He was finally promoted to be foreman of the factory. During his apprenticeship he had mastered all the details of the business and had also made many important suggestions as to improvements in the machinery. This German was no less a person than Christopher Meyer, subsequently the millionaire rubber-manufacturer.

Meanwhile, James Bishop, who knew nothing of the details of manufacturing, and wanting a thoroughly reliable man, laid his plans to secure Meyer's services. Having arranged for a private interview with Meyer, he made such flattering offers as induced him to leave Day's employ and enter that of Ford & Co., where he quickly demonstrated his value through the invention of a process by which the corrugated sole and heel of a rubber shoe were incorporated in one piece with the body of the shoe. This invention, which he patented in connection with Elias C. Hyatt, proved of great value. Meyer in due course became a partner with Ford & Co., of which concern Mahlon C. Martin was then bookkeeper and, in a very short time, a man of large wealth. He subsequently established the Meyer Rubber Co, now one of the important concerns embraced in the United States Rubber Co.

Hiram Hutchinson, after leaving Onderdonk, met with phenomenal success in connection with Jonathan Ackerman, having established a factory on the canal bank, on the present site of Janeway & Co.'s extensive wall-paper works. They finally, however, drifted to Newark, N. J., where they assisted in the organization of the Newark Rubber Co, which likewise proved a great financial success. Still later Hutchinson went to France, where the foundation was laid of the present firm of Hutchinson & Co., extensive India-rubber manufacturers. Hutchinson began by establishing a rubber factory at Langlée, near Paris, with Elias C. Hyatt as manager. The new business met with great financial success, which has continued under the management of a son, Joseph A. Hutchinson.

The latter, by the way, was a mere lad when his father was manufacturing goods in New Brunswick and an *enfant terrible*, whose principal and daily occupation seemed to consist in falling into the adjacent canal and being ignominiously fished out, but he seems to have borne that period in affectionate and lively recollection for when, a few years ago, the workmen were engaged in rebuilding Janeway & Co.'s wall-paper factory, destroyed by fire, which had replaced the Hutchinson factory, they found among the smoldering ruins a rubber shoe, in perfect condition, although for so long a time exposed to intense heat. Hearing of it through the newspapers, Mr. Hutchinson, who had attained a high social position and had become enormously wealthy and allied to the oldest family in France through his marriage with the daughter of the Duc de Montmorency, sent for the shoe for the purpose of placing it among his most cherished treasures.

Elias C. Hyatt subsequently returned to New Brunswick and, in connection with Christopher Meyer, bought out Horace Day's works in Dennis street and there manufactured rubber goods for several years. Finding the premises too contracted, however, they determined to build upon the present site of the United States Rubber Co.'s works, then belonging to Meyer; but Meyer holding the property at too high a figure, they disagreed, and dissolved partnership, Hyatt returning to France, where he established, unsuccessfully, a celluloid factory, and finally went to London where he at present resides.

Onderdonk, after selling out his interest to Hutchinson, as before stated, continued the manufacture of India-rubber successfully in connection with Johnson Letson, and in the late "forties" organized the New Brunswick Rubber Co., which from its inception has been a financial success and which for half a century has given employment to several generations of New Brunswickers and for many years manufactured incredible quantities of boots and shoes. But within a year or two past the shoe manufacturing plant of this company has been consolidated with that of the Jersey Shoe Co.—also owned by the United States Rubber Co.—and the factory devoted to the production of rubber tires, under the name of the New Brunswick Tire Co.

The Novelty Rubber Co. was organized in the "fifties," by Christopher Meyer and Martin A. Howell, when everything connected with the manufacture of India-rubber turned into gold, and the almost instantaneous success of the enterprise proved it to be no exception to the rule. The company made only hard-rubber goods, comprising almost every conceivable article, but the manufacture of buttons yielded them a golden harvest. For buttons were then in vogue for ladies' dresses and enormous numbers were required for that purpose, and, as large prices were realized, the company's dividends were correspondingly large. A large number of operatives were employed, principally women and girls, as the work was light and required a deftness in handling; but there were not a few male operatives as well, for when the war broke out, seventy-five men were employed exclusively in making tobacco pipes for the soldiers.

The dividends divided among stockholders of this company for some years were phenomenal. The following case will convey an idea of the profits distributed. A New Brunswick woman with small means was induced to buy fifteen shares of the stock at a comparatively low rate upon the organization of the company. In a very short time thereafter, she was the recipient of an envelope containing simply a check for $1500 to her order, drawn by the treasurer of the Novelty Rubber Co. She indignantly returned the check, stating that she had not authorized anyone to sell her stock and that she positively declined to sell. The check was again mailed to her, with the information that the $1500 was a dividend of 100 per cent.

on the shares held by her. But after the war was over, and when the fashion for ladies' dress trimmings had changed, the business languished, and, finally, the patents ran out.

The company then turned their attention to the ivory nut as a substitute for hard-rubber but without success, and finally they wound up the concern. The first treasurer of the company, if I am correctly informed, was Mr. Nicholas Williamson, who resigned from the Bank of the State of New York to take the position. A brother of Mr. Williamson founded a successful rubber manufacturing company in Scotland which is said to be still in successful operation.

Even in those early days there was a rubber trust. In the year 1848 four concerns, the Leverett Candee Co. and the Hayward Manufacturing Co, of New Haven, and the Newark Rubber Co. and the John R. Ford Co., of New Jersey, jointly secured a deed of trust making Jonathan Ackerman, of New Brunswick, a receiver thereof. By this deed of trust each of the above-named firms agreed to pay into the receiver's hands three cents for each pair of shoes manufactured by them to the extent of 500 pairs per day ; and five cents a pair manufactured over the stipulated 500 pairs. This money was to be paid into the hands of the receiver ; he to retain 15 per cent. thereof, to meet the expense of any litigation growing out of any infringement of the Charles Goodyear patents, as also to pay Charles Goodyear one cent for each and every pair of shoes manufactured by them. To this instrument (including many other voluminous provisions) was signed the name of Hiram Hutchinson as the president of the association.

The trust likewise sublet the privilege to manufacture under the Goodyear patent to Onderdonk & Letson. Thus it came about that the penniless Hiram Hutchinson, whom Onderdonk, only a few years before, had tried to "freeze out," had become the president of a rich and powerful trust, now had the satisfaction of conceding to his old enemy a privilege to work under a patent which he controlled.

The India-rubber industry came as a godsend to the citizens of New Brunswick. The opening of railway communication between New York and Philadelphia had ruined their commercial business, while the completion of the Delaware and Raritan canal had effectually done away with an extensive and lucrative transportation interest, affording employment to a large number of the working people. Hence there was scarcely a family in the town that was not benefited, directly or indirectly, by the development of the India-rubber industry ; indeed its effect was marvelous and instantaneous upon the social as well as the material condition of the population. Men who by patient industry and strict economy had realized perhaps a thousand dollars a year from their business, in many cases soon found themselves, through small investments in India-rubber stocks, the recipients of that sum in a single month. Needle women, even, who had been gaining a precarious living, at once became comparatively rich. Speculation became rife, appealing to the interest of all classes, high and low, and as the price of rubber stocks rarely receded in price, but on the contrary went steadily upward, there were no losses. The workingman, too, together with his wife and children, found steady work at remunerative wages. This condition, indeed, has prevailed in New Brunswick almost up to the present time, son succeeding father in the rubber mills, and it is probable that in no other community has the wage-earner found so certain and so steady employment for half a century past as has been enjoyed by the workers in the India-rubber factories of New Brunswick and its vicinity.

## AMERICAN RUBBER GOODS IN EUROPE.

MR. A. J. GORDON, the European selling agent for the Boston Rubber Shoe Co., who is now visiting this country, chatted very interestingly with the editor of THE INDIA RUBBER WORLD recently. He said : "Very few manufacturers on this side of the water appreciated the market conditions that obtain in Europe. Take it in England, for example. The people there, to begin with, have a prejudice against light goods,—a feeling that they cannot possibly wear as well as the heavy goods, and unless something in the way of the education of the masses is attempted the sales cannot be very large. There is another point too that American manufacturers of shoes do not seem to appreciate. It is impossible for them to compete with continental manufacturers in making cheap shoes. Some little time ago when American rubber shoe manufacturers were cutting prices so that there was no money in the business for anybody, they sold quite a lot of rubber shoes abroad, but very soon the continental manufacturers were able to meet their prices, and even go below them and make money. There is however a definite market for high priced goods over there. I am selling shoes manufactured by the Boston Rubber Shoe Co. of special styles as high as a guinea a pair and the trade is increasing. Another thing that these European buyers want is more stability both in prices and styles. If one of my customers gets a style of shoe that suits him he does not want any change whatever in it. It makes no difference what the progressive selling agent or manufacturer may think. A slight change, even if it is a manifest advantage to the shoe, will provoke him and he will take his trade elsewhere. Nor does it please him to say "we are going to give you 10 per cent. off of the price you paid last year." He simply wants to know why he did not have it before, and whether it is going to be put on again the year after. Further than this they are absolutely insistent upon dealing with men in whom they have confidence. Rubber manufacturers have through their own foolishness greatly injured the trade abroad. For instance, a great house in London, something like Jordan & Marsh, of Boston, bought a lot of American mackintoshes by sample. The goods were shipped to them and were paid for. When they got into the hands of customers however it was discovered that they were not waterproof, the compound being so poor that the water went right through them. The house on learning this put a flaming advertisement in the daily papers to the effect that they had been swindled by an American rubber manufacturer and had unwittingly sold mackintoshes that were worthless. They added that if purchasers of these goods would return them, their money would be refunded, and they would also be paid for their time and trouble, and that the goods would be destroyed by fire in their presence. Now," continued Mr. Gordon, "that rascally house not only shut themselves forever out of the London market, but they so injured that market for other manufacturers, that to-day it is almost impossible to sell American mackintoshes in England."

# POLITICAL OUTLOOK FOR THE AMAZON RUBBER COUNTRY.

*By M. F. Sesselberg (Pará).*

A CLEVER young journalist of Pará, who is already an authority on the history and geography of Brazil, thus gives his opinion of the present situation, growing out of the revolution in eastern Peru:

"I do not wish to pose as a prophet, foretelling the consequences of the political movement in Loreto, after the adherence of the people there to the general government for sixty years. But the reality can no longer be ignored. Sooner or later the golden dream of the political fusion of Brazilian and Peruvian 'Amazonia' will be realized, proving one of the most curious geographical phenomena of the century. And after Peruvian Amazonia will come Bolivian Amazonia, Venezuelan Amazonia, and part of Ecuador, forming one body, one nation, from the Atlantic to the Andes. . . . . The separation which we predict is not the work of spite. Our state opulence, and that of Amazonas, is derived from the present republic of Brazil. . . . . If she did and does oblige us to accept a detestable exchange, we only suffer, and have suffered, with all the other states, and, as an abnormal phase, we quietly accepted it. In the time of the monarchy, a minister of finance disdainfully declared that there was enough rubber-sap in our own trees to content the people of our provinces. Now, after five years of republican régime, what vast and rich horizons are opened to us! . . . . . Our present finances—our ascendant political economy—provoke admiration. This revolution in Loreto is the first if not the last signal of the procuring of that political vein which is nearest and most adaptable."

Another prominent writer here has published an article from which is condensed the paragraphs which follow: This separative revolution involves the whole of Loreto, which is the most extensive department of Peru, embracing five provinces. It covers half of the Peruvian territory, though having not more than 100,000 inhabitants. The fact that this section wishes to become an independent state is of especial interest to Brazil, since it includes all that portion of Peru which touches the Brazilian border. "This revolution, so far successful, has the advantage of great resources in the way of soldiers and arms; it is also favored by rich American, English, and German merchants. All of the commerce of that department for the United States and Europe must descend the Amazon, of which Manáos and Pará are the chief harbors. What is Peru able to do? In Peru there are many military politicians, but no great military men in the proper sense of the word. The Peruvian army officers are all politicians. In the event of war Peru can command an army, west of the Andes, of 40,000 men, who may proceed through the mountain passes only with great difficulty to subjugate rebels who can procure arms and provisions with ease by way of the Amazon. Only a few bold voyagers have crossed from the Peruvian coast to the Amazon; how then could artillery and provisions be transported through the passes?"

The commerce—and especially the India-rubber commerce—of the Peruvian margins of the great river has increased prodigiously during late years, by means of the steamers which descend the Amazon much more securely and rapidly than Lima can be reached overland. Even the Peruvian officials who go from the capital to assume their duties in the department of Loreto, go by preference via Panama to New York, sailing thence to Pará, and up the Amazon to Loreto. Loreto is inevitably lost to Peru. Amazonas is linked to Loreto by ties of blood, propinquity, and commercial interest. Its commerce is with Brazil, and for Brazil. Iquitos now numbers 10,000 inhabitants, who are nearly all Brazilians; it is the commercial point of the great movement of the products of eastern Peru. Mounier has called it the metropolis of the Amazonian *montana*. Caballococha, still nearer, is highly prosperous, and large quantities not only of India-rubber, but of tobacco and sarsaparilla, are brought there in canoes by the western rivers, Napo, Tigre, Pastaza, Fluallaga, Ucayali, and Javary. Altogether, this is an important region, and bound steadily to become more so.

The *Provincia do Pará* quotes the following from *The País* in respect to recent occurrences at Iquitos:

"It is notorious that contraband in a large scale is exercised on the river Javary. Every one knows that the greater part of the India-rubber produced on this richest of rivers, on the Brazilian side, is transported to the frontier coast, and then exported as Peruvian, and so free from import duties. As well is it known that imports from the United States and Europe for Iquitos are returned from there to Brazilian territory and so escape duties at Pará and Manáos. In this way, in consequence of the bad administration of the neighboring department, commercial exchequer interests are largely prejudiced and have no means to guarantee themselves against the fraud favored by the extensive territory and the multiplicity of rivers crossing it. . . .

"The proclamation of the independent state of Loreto is a fact then of the profoundest interest to Brazil, constituting a problem of difficult solution, as we are bound by the impositions of neutrality (that irrational clause of monarchical treaty of October 23, 1865). Yet perhaps we will be obliged to interfere; all our interests too largely compromised on the Amazonian frontier. . . . The gravity of the case is augmented by the fact that the greater part of the population of the revolted territory are Brazilians whose speciality is the rubber trade."

Pará, Brazil, July 8, 1896.

* * *

## COLLAPSE OF THE REVOLUTION.

THE revolution in Amazonian Peru, centering at Iquitos, the headquarters of the India-rubber trade on the upper Amazon, came to a sudden termination during July. Colonel Seminario, the leader of the rebels, who had so boldly declared the independence of the department of Loreto, and seized the treasury and other government offices, after appropriating the revenues, fled the country. Señor Larranga, the Peruvian consul at Pará, was ordered to proceed up the Amazon to Iquitos and assume, temporarily, the position of governor of the department. Meanwhile, a Peruvian transport with troops and artillery, had left the Pacific coast, to round the Horn, with a view to attacking the insurgents on the Amazon. While the trouble lasted—scarcely more than two months—it was a matter of no small interest to the people of Pará on account of the feeling entertained by many that political changes may occur at any time in the Amazonian country which may have a bearing upon the chief industry of that section—rubber-gathering.

The Lima journal, *El Comercio*, grows enthusiastic over the prospective expansion of the commerce of Peru in consequence of the opening of a second line of steamers to the United States. Formerly the trade of Peru with this country had to go by the Panama route, subject to costly reshipment across the isthmus, or around the Horn, to Liverpool, and thence to New York—the expense of transportation in either case being well-nigh prohibitive. The result of the operation of the New

York and Pacific Steamship Co. (the Merchants' line) for two years has been to reduce rates to New York one half, and further results in this direction are expected from the inauguration of the new West Coast line to New York. The Peruvians are also hopeful of getting a line of steamers to San Francisco. By the way, *El Comercio* predicts that much India-rubber from the region of the river Madre de Dios will now find its way—probably by rail—to Mollendo, on the Pacific, thence to be shipped by steamer to New York. Another item of Peruvian rubber news from the same paper is that Don Carlos Mouraille, already mentioned in THE INDIA RUBBER WORLD as an extensive India-rubber operator on the upper Amazon, has inaugurated a new transportation service between Iquitos and Havre, beginning with the steamer *Huascar*, which he owns.

## THE AMAZON RIVER AND ITS CABLE.

A LECTURE entitled "Cable-Laying on the Amazon River" was delivered by Alexander Siemens before the Royal Institution of Great Britain on May 15, in relation to the new cable between Pará and Manáos, and embodying some facts which may prove of interest to the India-rubber trade. The lecturer, by the way, is the distinguished head of Siemens Brothers & Co., Limited (London), who were contractors for the Amazon cable, and whose work in laying it, with the aid of their cable-ship *Faraday*, has been referred to already by THE INDIA RUBBER WORLD.

First it was necessary, on account of the absence of reliable charts of the Amazon, to make a preliminary survey of the river, which took place in October, 1895, during the hottest season, and when the water was lowest. The cable was laid during January and February last, when the rainy season had commenced, and the river was rising. The difference in temperature between the two periods was only about 10° F. The source of the Amazon was discussed in the lecture, with a reference to the immensity of its great volume of water, collected from an area of more than 2,500,000 square miles, for the most part covered with dense forests. This volume pours into the Atlantic between the Cabo do Norte and the Cabo Maguari, which are 150 miles apart. The width of that part of the river discharging north of the island of Marajó is compared to that of the English channel, while in depth and volume of water it is far greater. "It is a disputed question whether the water flowing south of Marajó, commonly called the Pará river, should be considered as part of the Amazon or not. A network of natural canals, 'the narrows,' connects the two waterways west of Marajó, but the influence of the tide makes it difficult to decide whether part of the water of the Amazon finds its way south of Marajó or not. . . . . While the largest vessels can ascend the river nearly to the foot of the Andes, the constantly-changing sand banks at the mouth of the Amazon proper make this approach of the river dangerous, and the state of Pará is for obvious reasons not over anxious to have the deep channels properly buoyed and surveyed. This forces all the shipping to enter the Pará river, and to pass the narrows of the Amazon is the goal of the journey."

As for the city of Pará, it is not even situated upon the Pará river, but upon a branch of that stream called the Guajará, which forms a narrow basin in front of the city. As the cable-ship could not approach close enough to Pará, the shore-ends of the cable were laid with the help of a barge and a tug. "The harbor and the general aspect of the town, but for the presence of palm trees, do not differ much from a European seaport. Even the clothing of a good many inhabitants seems better adapted to a colder climate; it is only the airy costume of the ladies, and still more the absence of any costume on the children, that betrays the tropical climate. The harbor of Pará is very full of shipping, and the general build of the steamers is well adapted to navigate the broad waterway of the main river, as well as the smaller and shallower affluents which become more and more inhabited from year to year."

The first station on the main cable, after leaving *Pará*, is *Breves*, on the island of Marajó, the center of the rubber trade of the islands of the lower Amazon, situated in the center of "the narrows." Next in order come *Gurupa*, *Monte Alegre*, *Santarem*, and *Obidos*, the last point touched in the state of Pará. Beyond the boundary, in Amazonas, are stations at *Parantins* and *Itacoatiara*, after which the cable terminates at *Manáos*.

There are branch cables as follows: (1) From Pará, along and across the Pará river, in the direction of the Atlantic, to *Pinheiro*, *Musqueiro*, and *Soure*; (2) from Pará to *Cameta*, on the river Tocantins,—a small place boasting of several two-story buildings, in a prosperous municipality; (3) from Garupa, among "the narrows,' and crossing the Amazon, to *Macapa* and *Chaves*; (4) from Santarem to *Alemquer*. The total number of intermediate stations is sixteen.*

Santarem is at the mouth of the river Tapajos, which is 1300 miles long, and is formed by the union of two rivers which rise so far south that in the rainy season, when the waters of the various streams commingle, it is possible to pass in a boat from the mouth of the Rio de la Plata, in Argentina, through the interior, crossing the Amazon, and out through the Orinoco to the Atlantic again.

"With all rivers carrying sediment, the Amazon shares the peculiarity that its immediate banks are higher than the country lying behind them, and thus we have in the rainy season the spectacle of the main river flowing between two banks covered with dense forest, and immense lakes stretching out on either side of these banks. These do not entirely dry up during the remainder of the year, so that the whole of the Amazon valley really forms a huge swamp covered with a most luxuriant forest, which below Manáos narrows to a broad belt close to the main river with prairies, called *campos*, at the back of the forest stretching out to the hills, where the forest recommences. In such a country no land communication of any sort can be attempted, as the tropical vegetation, and the annual inundations of the rivers destroy everything that man places in the way of the natural forces. By water, on the other hand, the intercourse between all habitable parts of the country is easy and expeditious since steamers have been introduced in the year 1853. At that time the journey from Pará to Manáos was shortened from forty days to eight days, and at present the ocean-going steamers, which do not call at the intermediate places, accomplish the distance in three days."

"The town of Manáos has completely changed its character since it was made the capital of that region in 1853. A town, quite European in its features, has arisen in the midst of the forest, and to the benefits of rapid transport, to which it has owed so much, there is now added the characteristic lever of modern progress, the annihilator of space and time—electrical communication."

The rubber-gathering industry is characterized by Mr. Sie-

* All these places can be found on good maps of Brazil, including a map of the state of Pará in THE INDIA RUBBER WORLD of May 15, 1894.—THE EDITOR.

mens as "at once the wealth and the bane of this part of the world. The implements in use are of the most primitive kind, but the average earnings can easily be £3 per day during the dry season, and the facility of earning so much money with so little exertion makes the inhabitants unwilling to engage in more arduous labor. . . . Owing to the rise of the river during the rainy season most of the huts have to be abandoned, and it can easily be imagined how comfortless they are. Nearly all of them are built on piles, and most of them are thatched with palm-leaves. There is hardly any attempt made to cultivate the soil, such as it is, but everything is imported. The steamship *Cametense*, in which the surveying party went out, was laden with cabbages, onions and potatoes, part of which went as far as Iquitos, in Peru. Chiefly owing to this want of provisions, and to the generally careless mode of life, the mortality among India-rubber gatherers is very great."

## BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

*TIRES.*

No. 558,455.—Elastic-tread Horseshoe. Thomas Lewty, Manchester, Eng., assignor to Hiram H. Gibbs, Indianapolis, Ind.

An elastic-tread horseshoe comprising a metal frame and a rubber cushion on the back thereof between the frame and the hoof, the back of such frame being provided with means for preventing lateral movement of the rubber cushion when in place.

No. 558,802.—Pneumatic Billiard-cushion. Henry A. Bierley, Portsmouth, Ohio, assignor of one-half to Samuel Harchaw, same place.

An improved pneumatic cushion for billiard-tables and the like, consisting of an outer hollow strip of rubber of triangular or sector shape in cross section, and having the outer surfaces of its expansible upper and cushion walls slightly hollow or concave, to compensate for the undue expansion of such walls, and whereby when the strip is inflated the surfaces will not project beyond the planes of the respective sides of the strip, but will expand flush therewith, and an inflatable tube within the strip.

No. 561,512.—Pneumatic Tire. George B. Humphrey, Derry Station, Pa.

A pneumatic-tire clamp consisting of the metallic straps arranged one upon each side of a slit in the outer tire and hinged or pivoted at their ends to separate strap-sections, connected at their outer ends to additional strap sections.

No. 561,738.—Vehicle wheel. John R. Terry, Long Island City, N. Y.

A vehicle-wheel, comprising a hollow rim, a felly within the rim, a hub, spokes connecting the felly with the hub, yielding cushions interposed between the felly and the inner walls of the rim, and springs carried by the felly engaging the cushions for yielding, holding them in position.

No. 561,904.—Pneumatic Tire. Pierre Mercier, Paris, France.

A pneumatic tire for vehicles having a layer of rubber vulcanized and subsequently treated with melted vaseline to cause the closure of punctures.

No. 561,905.—Material for protecting vessels, receptacles, etc. Pierre Mercier, London, England.

As an improved article of manufacture, a self-healing fabric consisting of slightly-vulcanized India-rubber impregnated with liquid vaseline in the presence of heat, and having non-elastic confining-threads incorporated therein prior to impregnation.

No. 562,650.—Pneumatic Tire. James W. Paige, Chicago, Ill.

The combination in a pneumatic tire, of a tube having an interior annular flap integral with and forming a part of the wall of the tube, said flap extending continuously throughout the length of the tube, a series of flexible partitions secured within the tube, and an inflating tube extending through the outer body of the tube and against the annular flap, whereby, when air is forced into the inflating-tube under pressure, it may temporarily separate the flap from the main body of the tube throughout its length and escape laterally into the respective compartments.

No. 562,723.—Pneumatic Cycle Tire. Hermann Gruttner, Berlin, Germany.

Connecting the covers edges of pneumatic tires by means of two hooks lying one behind the other, and two hooks arranged correspondingly at the two flaps of the other edges, so that two hook connections are obtained, arranged along different lines.

No. 562,764.—Hole-closing Device for Bicycle tires. James L. Hatch, Milford, Mass., assignor, by mesne assignments to The Hatch Bicycle Patch Company, Saco, Me.

A hole-closing device for bicycle tires, consisting of a metallic spring-clip having an interior opening less than the diameter of the tire, and adapted to be applied to and but partially surround a deflated tire, the subsequent inflation of the tire expanding and seating the clip firmly on the punctured part of the tire.

*MECHANICAL GOODS.*

No. 561,226.—Sprinkling Device. Frank L. Schild, Grand Rapids, Mich., assignor of two thirds to Charles C. Schild and Peter J. Schild, Ionia, Mich.

The combination with a supporting-standard having a horizontal extension near its upper end, of a deflector having a clasp for engaging a spray-nozzle, the deflector being provided at or near one end with an eye bearing through which is received the horizontal extension of the standard, and a horizontal stop formed as a continuation of the standard, and adapted to engage the nozzle.

No. 561,442.—Flexible Elbow for Connecting Pipes. Charles R. Schmidt, Baltimore, Md.

A flexible connection for pipes consisting of a section of flexible material having a tapered screw-threaded collar on its end in combination with a correspondingly screw threaded sheet-metal ring fitting the collar, and a nut screwing over the ring.

No. 561,441.—Flexible Elbow for Connecting Pipes. Charles R. Schmidt, Baltimore, Md.

A flexible connecting-elbow having an internal flanged substantially inexpansible bell end.

No. 561,759.—Hose-Reel. Charles H. Briggs, Kankakee, Ill., assignor of one-half to Thomas A. Kerr, same place.

The combined reel and housing for hose and the like comprising an open-topped receptacle provided with circular sides against the interior of which the hose is adapted to be coiled concentrically and the support upon which the receptacle is revolubly mounted so as to rotate about a vertical axis.

No. 562,345.—Lawn-sprinkler. William Rundquist, Elgin, Ill.

A lawn sprinkler comprising an interiorly-threaded shell, cylindrical throughout its length, except at its lower end where it is provided with a contracted threaded nipple, a flat disk-like plate fastened to the upper end of the cylindrical shell and having a central discharge-opening, a peripherally-threaded disk or plug screwed in the threaded shell forming a vortex chamber between itself and the flat plate and provided within

its edge, with the diagonal passages on opposite sides of the vertical axis of the sprinkler, the passages arranged reversely to each other and to direct streams or jets of water across the vortex-chamber and against the horizontal face of the flat plate.

No. 562,540.—Packing-ring for Pump-pistons. William E. Karns, Parker's Landing, Pa.

A packing-ring for pump-pistons, comprising an exterior yielding shell or cup constructed of dental rubber and having at its lower edge an inturned flange, a ring of webbing arranged within the shell and projecting above the upper edge thereof, a second ring of webbing arranged within the first-named ring, and also extending above the upper edge of the exterior shell and a strengthening ring of metal interposed between the webbing-rings, terminating at its upper edge below the plane of the upper edge of the shell to allow the upper edge of the shell to yield and flange at its lower edge to lie parallel with the flange of the shell, whereby the strengthening-ring lies within and parallel with the angle formed between the body portion of the shell and its inturned flange.

No. 562,542.—Wringer-roller. Charles A. Kobl, Cleveland, Ohio.

A wringer-roller comprising a cylindrical tube covered with rubber and provided with headed ends, one of which heads is internally threaded, a lug upon one of the heads, and a wringer-shaft threaded upon one of its ends and provided with a keyway adapted to receive the lug.

*BOOTS AND SHOES.*

No. 562,113.—Attaching Device for Rubber Heels. Albert N. Barrett, Los Angeles, Cal.

A boot or shoe heel comprising a solid rubber body having a horizontal slit about midway of its height, and a retaining-plate formed with a horizontal upper flange adapted to be secured to the sole of a boot or shoe, with a vertical pendent flange embracing the upper portion of the entire body, and with inwardly-projecting teeth at the base of the pendent flange occupying the horizontal slit in the body; the body by its yielding property being adapted to be sprung into and out of the retaining-plate.

*SPORTING GOODS.*

No. 561,618.—Cricket-bat. Ernest Sefton, Christchurch, New Zealand.

A bat-handle formed of fibers of cane held by a Gutta-percha envelope and glued together only at the end which is dovetailed into the blade.

*CLOTHING.*

No. 562,784.—Gentleman's Storm-legging. Charles Fisher, San Francisco, Cal.

In a legging for gentlemen's wear, the combination with the legging-body, of the tongues or strips attached to the inside of the legging-body at points above the bottom edge of the legging and adapted to engage the turned-up bottom of the trousers and means for fastening the edges of the legging-body together.

*MISCELLANEOUS.*

No. 561,317.—Soft-tread Horseshoe. James Freyne, Philadelphia, Pa.

A horseshoe composed of rubber and provided with laterally-projecting plates of metal formed with nail holes or slots and with apertures that are filled with the rubber of the shoe and therefore serve to effect the permanent retention of the plates with respect to the shoe.

No. 561,911.—Billiard-table Cushion. Jacob N. McIntire, New York, N. Y., assignor to the Brunswick-Balke-Collender Company, same place.

The combination, with a cushion strip of rubber compound, having a soft flat working face that is slightly oblique to a vertical plane, and that is located relatively to the table-bed, so that the ball first contacts, at a point below the top edge thereof and above the level of ball's center, of a face-hardening strip molded therein with its upper edge located as near as practicable to the upper edge of the face and extending, thence, downwardly and rearwardly, or in a plane divergent from that of the face.

No. 562,281.—Method of Making Gutta-percha cloth. Jos. S. Coyte, New York, N. Y.

The method or process herein described of making Gutta-percha cloth, which consists in superimposing sheets of cloth and Gutta-percha pressing these sheets and while under pressure subjecting the cloth and one face of the Gutta-percha to heat, and concurrently therewith cooling the other face of the Gutta-percha.

No. 562,302.—Horseshoe. Antonin Juillard, Paris, France, assignor to Le Fer a Cheval Caoutchouc, same place.

A horseshoe comprising an India-rubber block, a protective metal band placed round the outer edge of the rubber and having inwardly-projecting perforated parts, and perforated canvas strips.

No. 562,514.—Billiard table cushion. Wallace F. Dunn, La Porte, Ind., assignor, by direct and mesne assignments to the Brunswick-Balke-Collender Company, Chicag , Ill.

In a billiard-table cushion, the combination, with a cushion strip having a rounded front, upper edge, of an interiorly-arranged face hardening device, composed of some practically non-extensible material and having its main portion arranged nearly, or quite, parallel with the working face of the cushion-strip, while its upper portion is bent rearwardly and extends backwardly from the rounded edge of the cushion-strip.

*DESIGN PATENT.*

No. 25,590.—Bicycle-saddle. William I. Bunker, La Grange, Ill. Filed Oct. 22, 1895. Serial No. 566,562. Term of patent 7 years.

## SELLING RUBBERS AT A PROFIT.

BY A RETAIL SHOE DEALER.

DURING the long winter season, rubber boots and shoes form a very important part in the stock of the shoe-dealer. In fact, in my experience, they form nearly one-half of his stock, for, if we have the right kind of weather, one-half of the dealer's sales are made up from these goods. That shoe-dealers look upon this subject with so little concern is more than I can understand. It is just as important that they should sell rubber boots and shoes as that they should sell leather goods. Usually the first thing that occurs after the first snowstorm is to see some shoe-dealer hoist out a sign offering rubber boots and shoes at a profit of from two to five cents per pair. Then, to offset this, his next competitor offers his goods at cost, and thus they begin. Very often rubbers are sold for less than they cost. Another bad thing is that many dishonest shoe-dealers will get second, third, and fourth-rate rubbers and offer them as first-quality goods at a much lower rate than their competitors, who, unless they know the goods that are being sold, cannot compare, and they wonder how it is that these goods can be sold at so low a price.

My idea is to put a profit of at least 33⅓ per cent. on all rubber boots and shoes and sell them at that. In other words, if an arctic shoe should cost you $1, sell it for $1.50, and a shoe that costs you $2, sell it for $3, and a rubber that costs you 50 cents sell it for 75 cents and in this way, you can make a profit that will pay you to handle rubber boots and shoes and enable you to pay your store expenses; otherwise, you are paying the expenses of running your store for the fun of selling goods at what they cost you or even less. Is there any business in this? Is there the first particle of enterprise in this? Some dealers may call it enterprise to cut their competitors' throats and disposing of goods in this way. I do not. My theory is, that what is worth having is worth paying for. If any readers are in localities where there is a strong competition, why are they not smart enough to get the members of the trade to come to-

gether to make some definite decision in regard to each season's trade of standard goods of this character? Try it and see if it will not pay in the end.—*Boot and Shoe Recorder.*

## BICYCLE-TIRES AS SCRAP.

IT is natural, in view of the great production of bicycles, that attention should be turned to the utilization of worn-out tires—and all will be worn out in time—in the rubber-reclaiming industry. The impression seems widespread that, since tires are made of the best grades of rubber, they should bring a higher price when they finally reach the scrap-heap than other classes of rubber waste. Hence dealers in scrap rubber, together with rag-dealers and other who handle such material, are being asked on every side to make offers for lots of worn-out or defective tires, and doubtless a considerable quantity has changed hands. Up to date, however, prices have not become established for tire-scrap, as in the case of old shoes and other staple classes of rubber waste. A large rag-dealer in New York, who receives daily one or more tons of old shoes, expressed the opinion that tire-scrap was worth one cent per pound more than shoes; another dealer in the same line said tires were worth two cents more than shoes; while buyers of rubber waste for grinding, and dealers in such stock, insist that tires are worth practically no more than shoes. In fact, they cannot be said to be worth as much, so long as shoes meet a ready sale, while tires are declined by most consumers of scrap rubber.

An important reason why rubber-manufacturers hesitate to buy tire-scrap is that the supply has not yet become regular. They can confidently base their operations, involving the use of reclaimed rubber, upon a steady, unfailing supply of old shoes, at a comparatively stable price, but the handlers of scrap would scarcely care to promise the delivery at stated intervals of stated quantities of old tires, at any price—especially if a given quality were demanded.

But a still more important consideration relates to this very matter of quality, which in nothing else, it seems, is so irregular as in tires. There are more than two dozen manufacturers of rubber tires in the United States, each advertising from two to ten or more grades and styles of tires, and each still experimenting more or less in the manufacture, anxious lest somebody else may bring out a better or a lower-priced tire. Not only have many different grades of crude rubber entered into the construction of tires, and, no doubt, more or less reclaimed rubber, and not only has every known compound of rubber been used, but there have been upward of 700 different "weaves" and patterns of fabric—linen and cotton—introduced into pneumatic tires. The result is a greater lack of uniformity in tire-scrap than in old shoes. The quality is so far from being uniform, in fact, as to have completely discouraged some of those who were most hopeful of good results from this particular class of scrap. Shoes differ in quality, it is true, but the difference which exists to-day was known at the beginning of the reclaimed-rubber industry, and it can be predicted confidently for to-morrow. There is a possibility of pointing out a mean, or an average, quality for shoes, and of regulating the compounds to be used in a rubber factory accordingly. But with tires, the most careful examination of a lot ground to-day might not prepare one for the successful treatment of a lot from another source handled to-morrow.

At least these are the reasons given by scrap-dealers and some rubber-manufacturers for the limited transactions so far in tires. It might be considered, on the other hand, that while the rate of output of pneumatic tires is now enormous, this rate has not long been maintained, and that a great proportion of tires that have been made are still in use, and are not yet really a matter of interest to the dealer in waste. At the same time there are to be considered the tires spoiled in making and those replaced under guarantees—two classes which have been for some years so large, according to common rumor, that a steady and considerable supply ought to be assured. Taking these forms of scrap into consideration, and the inevitable crop of worn-out tires within the next two years, at most, the market will be overrun with bicycle rubber. If, by that time, the manufacturers who have been experimenting with this stock have learned to manipulate it successfully, it may be that prices will be well maintained. By the way, some such result might as well be looked for, since it is foreign to the genius of our people to allow anything to go to waste. The fact that rubber tires have not come into general demand so far is not a proper criterion for even the near future.

In what has been written here reference has been made throughout to bicycle-tires, though similar considerations apply of course to pneumatic tires for vehicles of every class. Another form of tire which will inevitably reach the scrap-dealer is the solid rubber rim which has been applied of late to so many carriage-wheels. But changes in the market are not rapid, as is indicated by the fact that solid bicycle-tires are still offered to buyers, although this form of tire is now so obsolete as to be practically unknown to the greater part of the modern army of cyclists.

## OUTRAGES ON CONGO RUBBER-GATHERERS.

THERE have been additional reports of late concerning the atrocious maltreatment of native rubber-gatherers by agents of the Congo Free State, including a letter to the American Baptist Missionary Union, of Boston, by a Congo Missionary named Sjoblom, to the effect that while he was preaching one day to a crowd of natives, some soldiers seized a man who was present, bound him hand and foot, and shot him through the head, for the simple reason that he had brought in no India-rubber that day. In another village, he reports, several rubber-gatherers were killed by soldiers in one day for the same reason. In answer to a letter addressed to the Boston society one of its officials has written as follows:

TO THE EDITOR OF THE INDIA RUBBER WORLD: We have received several communications from Mr. E. V. Sjoblom, a missionary of this society at Bolengi, Upper Congo, as well as others, in regard to the outrages practised on the natives by the state officials, who force them to collect rubber for the government. You probably know that the government of the Congo Free State is in great straits for money, and the officials are in this way endeavoring to make all the money they can. We have, however, refrained from printing these communications. We have made representations to the king of Belgium, who is the president of the Congo Free State, through our state department at Washington, and the king has made satisfactory replies, promising a correction of the evil. We do not think it fair to make public these communications, as it might embarrass the Congo state government in correcting the outrageous conduct of their subordinates. We believe that the fault lies with the subordinates, not with the government itself; and, according to our latest advice from the Congo, measures have been taken which we trust will alleviate, if not wholly prevent, the oppressions practised upon the natives. E. F. MERRIAM.

Tremont Temple, Boston, Mass., July 9, 1896.

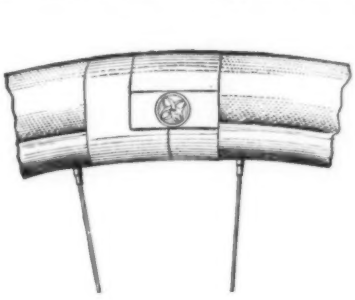
In relation to this subject the New York *Sun* says: "Numerous protests against these horrors, coming chiefly from England, recently compelled the Congo government at Brussels to manifest some interest in the matter. A few cases of outrage were investigated, and, as a result, the Congo state has ceased to pay a premium to its agents for the collection of rubber."

# NEW GOODS AND SPECIALTIES.

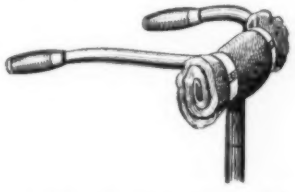
RUBBER shoe manufacturers are known in the general trade as "dry heat men," that is, all of their goods are vulcanized in a dry heat, where a certain amount of litharge is necessary to bring about a cure. Now any rubber compound that contains litharge is bound to be black, hence it is that when certain dealers asked for a white rubber shoe the rubber manufacturers were nonplussed. The National India Rubber Co., however, by substituting another material for the litharge, have succeeded in producing in a dry heat a pure white rubber for a certain grade of shoe. This shoe is sold principally for yachting purposes, the upper being made of white duck and the sole of a high quality of pure white rubber. It is certainly one of the neatest shoes ever put upon the market.

## THE CENTURY RUBBER BANDS.

THIS little article was called a tire bandage for the reason that it was invented primarily to repair punctures in pneumatic tires. When used in this manner a little cement is put on the puncture, the band wrapped three times around the tire, the



glove-like fastening snapped together, and the tire is repaired. It proved, however, so generally handy an article that it at once adapted itself to other uses. For instance the bicycle rider who happened to want a trousers guard snapped this around the ankle and it answered wonderfully; the wearer of knicker-



bockers also found that it made a most excellent garter; that it was easy to wear and did not slip; while as a bundle holder two of them were found to fasten a bundle to the handle bar or frame, securely and well. This little *multum in parvo* is manufactured by James L. Hutchinson & Co., 45 Vesey street, New York.

## THE SPALDING GOLF BALLS.

FEW people in the United States realize how the game of golf has taken possession of certain sections or how many golf balls are yearly sold. It is said that A. G. Spalding in 1895 sold not less than 200,000 dozen of them, and it is claimed that the demand for 1896 will be fully twice that amount. Mr. Spalding has therefore begun the manufacture of these goods, and is already putting on the market what is said to be a first class golf ball. The manufacturers claim for it that it is the hardest golf ball yet made, and will not only stand wear and tear, but will fly to a great distance. The ball is made of the best of Gutta-gercha carefully compounded for this purpose. The gum is first puri-

fied by certain chemicals, is masticated by very heavy machinery and then built up in such a manner that the outside covering is the strongest, and the point of union perfectly solid. Thus it is that the balls made by this concern do not chip or crack. The standard ball made by this concern is called the Spalding. They also make what is called the Boss Practise Ball, which term describes this use. These balls are fully guaranteed and are manufactured by A. G. Spalding & Brother, Chicopee Falls, Mass.

## THE McKAY NEVERSLIP SOLE.

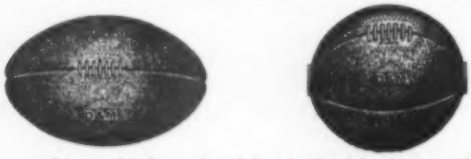
A RUBBER tap for men's shoes that is fastened securely to the sole, so securely that it cannot kick off, is shown in the accompanying illustration. By the McKay process the rubber tap is set into the outer sole, but not through it, and securely fastened with cement. This is done by a machine designed by the inventor of the sole, which cuts a pocket in the leather of the required depth, with an undercut of 65°. Into this the rubber is forced, and is thus held both by pressure and by cement as well. The company who own these patents propose to lease machines to shoe manufacturers, and also to sell the rubber already prepared for the soles. This rubber, by the way, is being manufactured by Morgan & Wright of Chicago, who have made some 70 molds for the different sizes of soles. It is proposed to have these soles made of a first-class quality of rubber, and in no case to have a poorer grade put upon the market. Manufactured by the McKay Neverslip Sole Co., 104 Jefferson avenue, Detroit, Mich.

## THE SUCCESS LAWN SPRINKLER.

THE manufacturers of this sprinkler surely have great reason for calling it the simplest, neatest, most convenient, and most durable lawn sprinkler ever brought out. It has no revolving parts to wear out, and can be pulled from place to place by a cord and ring without shutting off the water. It has a nickel-plated brass nozzle and hose connection and japanned malleable iron sled. It throws an umbrella-shaped spray from fifteen to thirty feet according to the water pressure. Manufactured by the Deming Co., Salem, Ohio.

## DRAPER & MAYNARD FOOTBALLS.

THERE is very little to say about footballs that has not already been very well said. In introducing these new manufacturers to the trade therefore about all that we can say is that



they are making a high grade of football with the very best of rubber bladder inside. The goods have already been put upon the market and dealers speak very highly of them. Manufactured by Draper & Maynard, Ashland, N. H.

## A RUBBER DIMPLE MAKER.

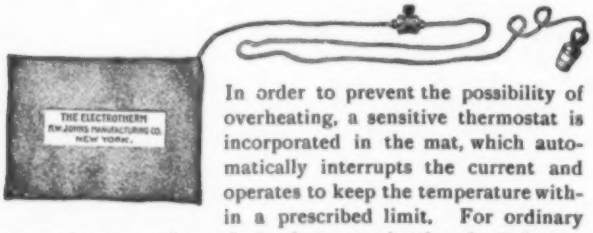
A LITTLE apparatus for making dimples has recently been patented in the United States, but as far as we learn is not as yet largely manufactured. The device looks not unlike a carpenter's bit-stock. A rubber tip, designed to produce the dimple, is set against the flesh and the handle revolved. A projecting arm carries a little roller which in revolving compresses the cheek around the central point. Six or seven applications it is said produce a most satisfactory dimple. Invented by Martin Goetze, Berlin, Germany.

## KELLOGG'S AIR-CUSHION SAFETY SADDLE.

THIS saddle is made in two parts and can be adjusted laterally and given any front or rear elevation, making it adjustable to any needs. The pneumatic cushion rests upon steel plates with a layer of felt between the plates and the cushion. The castings are made of steel bronze, and every part shows first rate quality in material and workmanship. Manufactured by V. H. Sweinhart Co., 56 Fifth avenue, Chicago.

## THE ELECTROTHERM.

THIS may be described as an electric heat-pad, and is designed as a substitute for hot-water bottles and for other like purposes. It is composed of asbestos-insulated wires woven into a flexible mat, which, when attached to the ordinary incandescent-lamp socket, affords sufficient resistance to the electric current to produce a constant and uniform degree of heat.



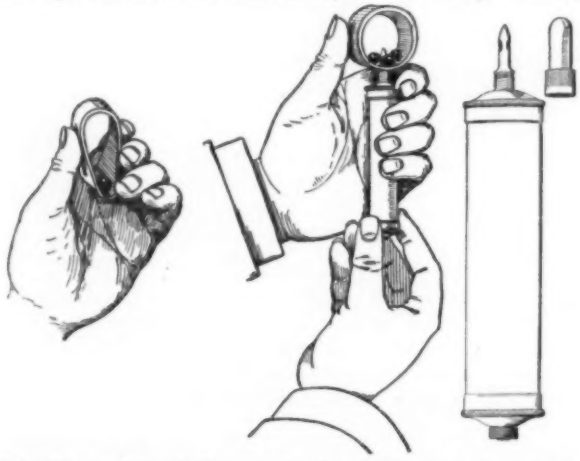

In order to prevent the possibility of overheating, a sensitive thermostat is incorporated in the mat, which automatically interrupts the current and operates to keep the temperature within a prescribed limit. For ordinary domestic use, as for replacing hot-water bottles, the "electrotherm" is supplied in pads 11×15 inches in size, ¼ inch thick, and weighing about 11 ounces, in a washable slip cover. When desired for moist heat, especially for use by physicians and nurses, the pad is provided with a covering of India-rubber. There are smaller sizes for foot-warmers alone, while some of the pads have been made six feet in length, with India-rubber coverings, for use on operating-tables in some of the New York hospitals. In the application of moist heat, the "electrotherm" can be made to serve as a poultice. The price of the pads of the size for ordinary use is $7.50. Manufactured by the H. W. Johns Manufacturing Co., No. 87 Maiden lane, New York.

## THE RUBBER REST SHEARS.

AN exceedingly ingenious machine for cloth shearing is one that depends wholly for its usefulness upon its rubber parts. This new "Rotary Shear," which is winning the highest praise from manufacturers, and which indeed is doing away with the old fashioned singeing process in many cases, is an English invention and has but lately been introduced into the United States. The interesting part of this machine to the rubber manufacturer is a semi-circular recess over which the cloth passes while being sheared. In this recess lies a piece of round rubber tubing covered with glazed calico. The cloth passes over this bed and when any knots occur the rubber tube, being of a yielding nature, allows them to sink in and thus prevents a hole being made in the piece during the process of shearing. For sale by the Woonsocket Napping Machinery Co., Woonsocket, R. I.

## THE JIFFY REPAIR TOOL.

THE illustration herewith shows a repair tool made by a practical man, and one that is so simple that it can be used by anybody. The tool is filled with a solution for repairing punctures, the wheel is elevated so that the work is done from the under side, the point of the tool inserted in the puncture, and the cap at the bottom of the tool is pushed to the right, forcing



the solution through the eyes in the point. It is then slowly withdrawn with a twisting motion which brings the three dabs of solution into one mass. The tool is easily filled by unscrewing the bottom cap and withdrawing the plunger. The solution used with this is a special mixture totally unlike rubber cement, and is said to be very efficacious in repair work. Manufactured by the B. F. Goodrich Co., Akron, Ohio.

## THE BARNES MAILING-MACHINE.

THE part that rubber type takes in the business world is but little appreciated, and yet in some kinds of printing it has worked a revolution. The Barnes Mailer is a new machine, that, depending upon rubber type for its working surfaces, is said to far outclass all other mailing devices. The names on the list are made in rubber like little rubber stamps. They are then mounted on flat plates, and are hooked together at the edges thus forming a chain, each link of which contains the name and address of a subscriber. These are rolled on a spool under the table of the machine, opposite another empty spool. The web passes up through a slot in the table, over a cylinder

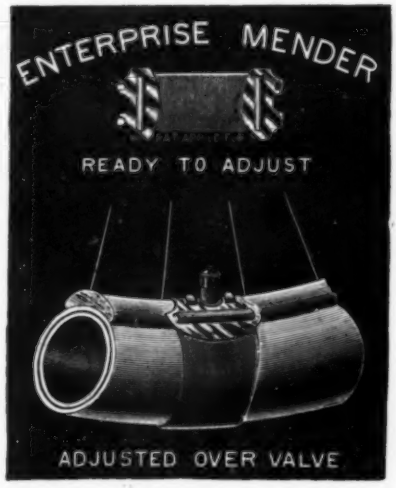
with flattened surfaces, and down again below the table where it is attached to the empty spool. The arm on the top gives the impression, the name being printed upon the under side of the paper which is placed beneath the arm. A simple inking device lies just under and in front of the cylinder so that every name is rolled as it comes up. A part of the mailing outfit is a set of type in which the subscribers' names are set up, the impression taken in the unvulcanized rubber, the sheet vulcanized, and the names cut apart and mounted upon thin metal plates. This mailing-machine, by the way, has recently been adopted by the United States government. Manufactured by the J. F. W. Dorman Co., Baltimore, Md.

## A NEW RUBBER TOE-CLIP.

RIDERS, and especially racing men, have often felt the need of a rubber toe-clip that would hold. The ordinary article, while good, has been found to be insufficient; there is too great a strain in using it on the upward movement; and of the rubber bands of various widths experimented with from time to time none have been found to be readily adjustable. The toe-clip shown in cut is said to have none of these objections. It is strong and serviceable, light and durable, and is always ready for use without special adjustment. It holds the foot firmly to the pedal, prevents side slip, and thus gives the rider a power on the upward movement of the foot not obtainable by any other means. It has proved excellent for track use, and although only lately introduced has been adopted by the most prominent men on the track. The "clip," it should be pointed out, is intended for racing purposes and is of small practical utility to the ordinary rider. It consists of a rubber band that encircles the foot at the pedal. Manufactured by Morgan & Wright, Chicago, Ill.

## THE ENTERPRISE TIRE MENDER.

THE illustration shows a very popular article among wheelmen, who suffer from punctures or from leaky valves. It is all ready to adjust, and one single snap mends the tire. As will be seen from the illustration it is simple, effective and always adjustable. Manufactured by the Enterprise Rubber Co., 111 Reade street, New York.




## THE WATERPROOF SUIT CO.

A NEW company in waterproof clothing has been formed at Chanute, Kansas. The special line of manufacture will be mackintosh railroad uniforms and complete suits of mackintosh clothing for all who are exposed to inclement weather. These goods are made in special styles and some of them by patent processes. It is said that the company already have thousands of dollars worth of orders for these goods. The officers of the company are C. R. Finch, Pres. and Gen'l Mgr., G. M. Lindsey, Treas., and L. B. Keefer, Sec.

## RUBBER IN THE CENSUS REPORTS.

WHILE the figures of the eleventh United States census in relation to the India-rubber industry—only recently made public after six years' delay—are probably of no real value to anybody, they may be of some interest to the curious. In the classification of industries by the census office the bulk of the India-rubber manufacture is embraced under three heads: Rubber and Elastic Goods, Belting and Hose—Rubber, and Boots and Shoes—Rubber. There was in 1890 one establishment noted in the industry classified as Vulcanized Rubber, but the details concerning it are not presented in the recently-issued census report. There are also numerous industries not embraced under the above headings which to-day, no matter how it may have been in 1890, consume in the aggregate considerable India-rubber as a minor material. But this article has to do with the rubber-manufacture proper.

RUBBER AND ELASTIC GOODS.

| | |
|---|---|
| Establishments reporting | 139 |
| Capital invested | $13,703,787 |
| Average number of employés | 9,802 |
| Amount of wages paid | $4,516,266 |
| Value of material used | $11,113,528 |
| Value of products | $18,708,917 |

[Location of establishments: Massachusetts, 50; New York, 20; Connecticut, 16; New Jersey, 12; Illinois, 11; Pennsylvania, 8; Ohio, 7; Rhode Island, 4; Wisconsin, 3; California, 2; Missouri, 2; Indiana, Maine, Maryland and Michigan, 1 each.]

BELTING AND HOSE—RUBBER.

| | |
|---|---|
| Establishments reporting | 17 |
| Capital invested | $5,270,068 |
| Average number of employés | 1,945 |
| Amount of wages paid | $1,043,768 |
| Value of materials used | $3,479,538 |
| Value of products | $5,512,840 |

[Location of establishments: New Jersey, 5; Massachusetts, 3; New York, 3; Connecticut, 2; Pennsylvania, 2; California, 1; Illinois, 1.]

BOOTS AND SHOES—RUBBER.

| | |
|---|---|
| Establishments reporting | 11 |
| Capital invested | $17,790,970 |
| Average number of employés | 9,264 |
| Amount of wages paid | $3,966,875 |
| Value of materials used | $11,650,787 |
| Value of products | $18,632,060 |

[Location of establishments: Massachusetts, 5; Connecticut, 2; New Jersey, 2; Pennsylvania, 1; Rhode Island, 1.]

RECAPITULATION.

| | |
|---|---|
| Establishments reporting | 167 |
| Capital invested | $36,764,825 |
| Average number of employés | 21,011 |
| Amount of wages paid | $9,526,909 |
| Value of materials used | $26,243,853 |
| Value of products | $42,853,817 |

From the mass of details in the census reports respecting the industries named above, the following additional table has been compiled, as containing matter of possible interest. It exhibits at a glance the elements of cost of producing goods of the value of $100, as follows:

| | Material. | Wages. | Miscellaneous. | Total. |
|---|---|---|---|---|
| Rubber and Elastic Goods | $59.40 | $24.14 | $6.06 | $89.60 |
| Belting and Hose—Rubber | 63.12 | 18.93 | 5.13 | 87.18 |
| Boots and Shoes—Rubber | 62.53 | 21.29 | 5.07 | 88.89 |
| All Industries | 55.08 | 24.36 | 6 13 | 86.17 |

The difference between the figures in the last column and 100 embraces the profit of manufacture, the cost of depreciation, and the whole range of business risks.

# THE MANUFACTURE OF INDIA-RUBBER PLASTERS.

*By H. W. Medberry (Chicago).**

THERE are gentlemen with us to-night who will remember the great annoyance of preparing plasters by hand. When a prescription was presented calling for a plaster of a certain size, it was necessary to cut out of pasteboard a frame for the plaster, tacking it on a board with the leather or kid underneath, get the plaster mass, heat the plaster irons, possibly over a kerosene lamp, and proceed to manufacture a plaster. We must not lose sight of the fact that the drug business of to-day is quite different from that of twenty-five years, yes, fifteen years, ago. Art, science and chemistry, aided by improved apparatus and machinery, have produced wonderful strides in the way of new products, which, in order to keep a well-stocked drug store, one must have.

Plasters belong to the oldest of medicaments, and every remedy externally applied, be it a liquid or a solid, was originally called a plaster. Later the term was restricted to solid compounds adhesive at the natural temperature of the human body and of such a consistency as to render the aid of heat necessary in spreading them. Leather, muslin, and linen were the material upon which they were spread, leather being the best material when the application was to be made to the sound skin, linen and muslin when to be used on ulcerated or abraded surfaces or for bringing together or retaining sides of wounds. The plasters in common use in those days were lead, aconite, ammoniac, asafetida, arnica, belladonna, mercury, iron, cantharides, galbanum, and others too numerous to mention. Lead plaster was the base of all the old style plasters, combined with resin, wax, and pitch, to which were added the medicinal ingredients to make the required plaster.

Plasters are quite essential to the physician's armamentarium. What would a physician of to-day do without plasters? But the annoyance of spreading plasters by hand as before mentioned has become unnecessary with the pharmacists of the present time by the introduction of machine-spread plasters so perfectly prepared as to be a great improvement over the old-fashioned hand-spread plasters.

The history of plasters, as we know them to-day, commenced about 1845, at which time the original process of dissolving India-rubber in benzin and incorporating with this solution the gums, balsams, and resins forming the mixture, which was spread on cloth with a brush. Plasters thus made presented a good appearance, but, owing to the short life of rubber in that dissolved state, the benzin-process plasters soon became hard and brittle, losing their virtue.

About 1876 commenced the experiments of grinding rubber by what is called the calendering process and incorporating with the rubber so ground first the adhesive material, such as olibanum, Burgundy pitch, galbanum, resin, wax, etc., and then the medicinal extract.

Pure Pará rubber is the base used in the plasters manufactured by leading manufacturers. It is perfectly neutral to agents mainly used in plasters, gives elasticity, flexibility, resists moisture and atmospheric influences, and is a preservative for incorporated drugs. The operation of grinding, mixing and spreading on cloth requires powerful machinery and skill, such as goes only with thorough training, to produce a plaster that is perfectly satisfactory in every particular. The important points to be considered in producing perfect goods are: (1) The combination of medicinal ingredients compounded with the proper base in such a manner as to produce a perfect plaster that will not spoil in any climate; (2) medicinal properties, to insure the desired result for which the plaster is used; (3) adhesive properties, so that a plaster will adhere firmly when applied without being too tacky, which would cause trouble in removing the face cloth.

Pará rubber is used in the best plasters and costs about 90 cents per pound. This rubber comes from Pará, Brazil, in large chunks called "hams." After the rubber is received at the factory with which I am connected, it is first steeped in hot water to soften it. It is then passed between two corrugated rollers, called a washer or crusher, where it is subjected to severe pressure, while a stream of water continually flows through it, removing all dirt and foreign matter, and it comes from the washer in sheets. These sheets are hung on steam coils for seven or ten days to dry and are then ready to have the other ingredients incorporated with them.

The next preliminary operation is mixing the gums, Burgundy pitch, resin, wax, etc., which form the compound. These ingredients are melted by a steam-bath and are strained for the purgose of removing all dirt and foreign matter. This compound is then mixed with the extract or other medicinal agents required and incorporated with the purified sheet rubber by passing repeatedly through heavy rollers, and while being ground through these rollers, orris root is incorporated with the other ingredients for the purpose of disintegrating the rubber fibers, which prevents the mass from running together after being spread on the cloth.

In all these operations it is due entirely to the skill of the plaster-maker, with the greatest care given to the minutest details in correctly preparing each ingredient, to give the required consistence to the mass, the length of time given to the grinding, the heat required in the rollers, all of which requires constant watchfulness to produce a satisfactory result. And right here it might be well to remember the fact that the same ingredients, working formulas and machines given to one plaster-maker, and all details followed to the letter, would produce a mass that would be absolutely worthless, where another using everything apparently the same would produce a mass perfect in every particular. On the same principle as two persons making bread, both using exactly the same ingredients, apparently doing the work in the same way, side by side, while the bread of one person is as good as can be made, the bread of the other is entirely worthless.

The product obtained as before mentioned is called a batch, and each batch is made proportionately for 100 gross lots of the regular 5″×7½″ size porous plasters. These batches are laid on zinc-covered tables and are then ready for spreading on the cloth.

The next operation is spreading the plasters. The calender through which the cloth is run is a machine weighing seventeen tons, which has three massive chilled iron rolls, called calenders. This machine is set in a rock foundation, owing to its tremendous weight and to prevent any vibration while in operation, which would affect the uniform thickness of the plasters while passing through the machine. The calendering machine is prepared by having the cloth (26 inches wide and 400 yards long) on a roll, and as it is passed through the rollers the plaster made is fed between the rollers onto the cloth, the thickness

*From an address delivered before the students of the Chicago College of Pharmacy. Reprinted from *The Western Druggist*.

of the plaster being gaged by a large wheel which raises or lowers the steel rolls. As the plaster comes through the calender it passes over the top of the same onto a large reel on which is wound the finished product.

The plasters are taken from the reel and wound on cylinders and cut any width desired. For a regular 5"×7½" porous plaster they are cut in widths of five inches, 100 yards long, and are then wound on spools in 100-yard lengths, ready for the perforating machine. The plaster is passed from the spool before mentioned through the perforating machine, the latter being so constructed as to punch the holes in the plaster, put on the face cloth and cut the plaster regular 7½-inch size, all in one operation. The machine can be so adjusted as to produce fifty plasters a minute. The cut plasters are then passed on to tables where girls paste on the back cloth, put them in the circulars and pack them two dozen in a box ready for the shipping department.

## RUBBER-PLANTING NOTES.

THE Pará rubber-trees in the royal botanic gardens of Ceylon are reported as having grown very much during the past twelve months. Director Trimen writes that "many of them are now over six feet in circumference at one foot from the ground, and would yield an appreciable quantity of rubber." It is intended to tap the trees this year. During 1895 about 77,000 seeds from these trees were sold to Ceylon planters, and 23,000 were sown in the government nurseries.

The demand for plants of the *Castilloa elastica* (the Central American rubber) is increasing in the island of Trinidad, and the royal botanic garden there finds a sale for all that can be raised. The trees thrive well in Trinidad, and Director Hart thinks that the trees in the garden will soon be large enough to yield liberally.

President Zelaya, of Nicaragua, has made a decree prohibiting the exportation of rubber from Nicaragua for the next ten years, excepting such as taken from cultivated trees. The amount of crude rubber imported from the republic into the United States during the fiscal year 1894-95 was 907,242 pounds, which doubtless comprised the whole Nicaraguan product. It is not known in this country that any cultivated rubber has been exported from Nicaragua.

## RANDOM NOTES FROM PARA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In the federal senate lately, at Rio de Janeiro, the baron of Ladario called attention to the outbreak of a rebellion in the Peruvian department of Loreto, which includes Iquitos, on the upper Amazon. He stated that, having traveled through this region, he had found a numerous colony of Brazilians settled there and prospering, mostly in the industry of rubber-gathering; that all of this rubber was exported as Peruvian, paying no duties to Brazil; and that a great contraband trade was carried on this district, much to the loss of the state of Amazonas. He urged the government to take steps to protect Brazilian interests on the upper Amazon. It is reported that the rebels at Iquitos have formed a provisional government, and will either declare their independence, or ask to be annexed to Brazil. It is hinted, by the way, that a similar movement might occur at any time in the Bolivian territory of the rivers Madeira and Purús. During the first quarter of this year 663,159 pounds of India-rubber were recorded at Pará as having arrived from the Iquitos territory.

Señor Joao Lucio d'Azevedo, of the firm of A. Bernaud & Co., rubber-merchants of Pará, and also one of our local *literati*, has contributed to *Provincia do Pará* an interesting series of articles under the heading "In New York," which city he visited last year. I have an idea that it is the same person who has translated in Portuguese lately, for one of the journals here, several articles from THE INDIA RUBBER WORLD. The *Italia Maritima*, an important periodical published in Genoa, in an interesting article on Pará, says that each day the commercial life here increases, and that to-day, in proportion to the population, its activity is equal to that of the United States.

Señor Ignacio Moura, a civil engineer of Pará, has published a graphic account of an invasion by the Itacayuna Indians into the celebrated *campos gereas* (great plains) of the upper Tocantins. As already noted in THE INDIA RUBBER WORLD, the existence of these plains was doubted until last year, when the Pimentel brothers, with several companions, conducted an expedition into the country referred to, undergoing great hardships. They discovered Indians there—whose tribal connection remains undiscovered—unacquainted with the u e of iron or of weapons, living in huts formed of twigs cut or broken with their teeth. It was these Indians who lately attacked a colony of rubber-gatherers and planters, established some months ago on these plains, and carried away or destroyed all the property of the colonists.

There are now no less than seven banks and eighteen brokers doing business in Pará, though it was not so long ago when this city was a paradise for the two or three firms who did all the banking and brokerage business here.

The Amazon river cable was recently cut at Itacoatiara and an investigation is to be had into the circumstances. It is rumored that it was done for supposed political effect.

GRAO PARÁ.

Pará, Brazil, June 27, 1896.

## A BONANZA FOR RUBBER-STAMP MAKERS.

A RECENT decision of the United States courts renders useless every endorsement stamp in the country. Following is a brief synopsis of the decision:

"Where a draft is endorsed to a bank 'for collection' or 'for account' of the endorser, the form of endorsement carries notice to the bank of payment that the bank to whom the paper is thus endorsed is a mere agent of the endorser to collect, having no proprietary interest in the paper. Hence, if the paper turns out to be forged (*i. e.*, raised in amount or payee's endorsement forged), the agent bank's own endorsement is not a guarantee of genuineness, and it is under no liability to repay the amount collected after it has paid the same to its principal."

On account of above decision, all checks, drafts, notes and bills of exchange deposited with any bank should be free from all restrictive endorsement such as "for collection," "for account of" or "for deposit," etc.

A resolution has been passed by the New York Clearing House Association to this effect and resolutions are being acted upon by numerous other clearing house associations throughout the country. Endorsements should be in blank or read "Pay to—— —— Bank, ——, or order."

No decision of recent years has had so widespread and immediate an effect upon the stamp industry as this. The Chicago *Inter-Ocean* in commenting upon it says: "Fully 50,000 rubber endorsement stamps have been rendered of no use by this decision in Chicago alone, and every stamp factory in the city is working overtime to keep up with the orders for the new style of stamp. As the decision will have the same effect all over the United States it appears to be a bonanza for the stamp factories of the country."—*Commercial-Stamp Trade Journal.*

# SIR JOHN PENDER AND THE WORLD'S CABLES.

THE death of Sir John Pender, on July 7, removed from the world the father of the ocean-cable interest, in the sense that it was his efforts which first secured the necessary financial basis for spanning the Atlantic successfully with a cable, and subsequently for encircling the globe with submarine wires. Born in Dumbartonshire, Scotland, in 1816, he received a high-school education and was apprenticed to a mercantile life, in which he rose to very high rank, accumulating a fortune in the export trade. Owing to his vast interests throughout the world he was much interested in the subject of intercountry communication, and he became an enthusiastic advocate of an Atlantic cable as soon as the subject was broached. He was one of 345 persons who contributed $5000 apiece to experiment in laying an ocean cable, and he was one of the few who were not discouraged by the failure of the first company.

Pender joined in reorganizing the cable company, thenceforth styled the Anglo-American Cable Co., upon a basis of $3,000,000 capital. The object was to lay a new cable, and, if possible, to recover the lost one. Negotiations were opened with Glass, Eliot & Co. and the Gutta-Percha Co., between which concerns difficulties shortly arose which threatened a final obstacle to the aims of the cable company. Here it was that the great Manchester merchant showed his mettle. One of the manufacturing establishments was unwilling to enter into a contract without a guarantee, and Pender offered his personal guarantee for $1,250,000, which was accepted. In the end the two manufacturing concerns named above were amalgamated under the name of the Telegraph Construction and Maintenance Co., which name is still worn.

John Pender occupied in Great Britain such a position as his illustrious colleague, Cyrus W. Field, did in America. When the American submarine telegraphic system had been established, he set about introducing the same plan of sea cable in other directions, and was chiefly instrumental in bringing about the Mediterranean, Indian, China, Australian, South African, and direct African cables, and thus, as was once publicly said of him, threw the girdle of civilization around the globe. He became the head, or at least the dominant spirit, of nearly all the submarine cable companies of the world. In recognition of his distinguished services to humanity Pender was knighted by Queen Victoria and received the highest decorations at the hands of several other sovereigns.

Sir John's death, by the way, is expected in some quarters to give an impetus to the movement for a new system of cables for the British empire entirely under British control. Sir John, with Scotch shrewdness, built up a huge cable monopoly. Sometimes marriage alliances helped him, sometimes political influence, sometimes courtesies which fill Madeira and other salubrious cable stations with sprigs of English nobility. Heavy pressure from Canada and Australia, with Mr. Joseph Chamberlain's sympathy, is loosening this cable ring's tight grip upon the empire. A Pacific cable conference has lately been sitting in private in the British colonial office, Earl Selbourne, the under-secretary, presiding. It has been agreed that an all-British cable shall be laid forthwith from Vancouver, B. C., to Australia, via the Fanning Islands, Honolulu being tapped by a branch line. It has decided that the cable shall be laid and shall be managed not by a subsidized private company, but by a cable trust formed by the British, Canadian, and Australian governments raising a capital of $9,000,000 on joint guarantee. In the event of this new link with Australia proving a strategic and commercial success, extensions will be made to South Africa and India, thus creating a trunk line of imperial cables. While the conference referred to has been adjourned to October, to await action by the new Canadian government, the cable scheme has by no means been abandoned.

The colonial office also is on the point of issuing a decision respecting a West Indian cable to avoid its present dependence upon the United States and Cuban lines which are allies of the Pender system. Two tenders are before the government. The West India and Panama Co. propose an extension from Jamaica northward to Bermuda to meet the Halifax-Bermuda cable, and thence to England. The Halifax-Bermuda Co. propose an extension south to Jamaica and ultimately to Trinidad and British Guiana. The West Indian governments urge the colonial office to accept the Halifax-Bermuda tender, which it probably will do.

It is said that the manufacture of the new Atlantic cable, which the Cie. Française des Câbles Télégraphiques intend to lay from Brest to Cape Cod, is progressing rapidly in France and it is expected that the laying of the cable will be completed within a year. The cable will be the first to be laid direct from Europe to the United States, as all the present lines touch at Newfoundland or Canadian points. The French government has commissioned the cruiser *La Drome* for the purpose of taking the necessary soundings. This vessel will arrive at Boston within a few weeks. In case the new cable does not return 5 per cent. income the French government will, it is said, make up the deficit.

It is understood that work on the cable which the same company contemplate laying from New York to Port au Plata, Hayti, to connect with their West Indian and South American lines, is at present delayed.

The German Submarine Cable Co. have been organized at Cologne to lay a cable between Germany, Spain, and America. Among the stockholders are the Eastern Telegraph Co. of which the late Sir John Pender was chairman.

From what has been reported above, and from other indications, it is evident that an era of unusual activity in the construction of sea cables is opening, which will involve the consumption of a large quantity of Gutta-percha. From the experience of the past, however, the cable-manufacturers are encouraged to look for the production of enough Gutta-percha, as wanted, to fill all normal requirements. There is another question, however, which may prove a more serious one—the replacing of all the existing sea-cables when their usefulness comes to an end. They must all fail at some time, and then there will be a demand, not only for the requirements of new projects, but for new cables to take the place of those now in use.

# HEARD AND SEEN IN THE TRADE.

THE head of at least one concern engaged in the manufacture of electrical materials does not share the opinions expressed in the last INDIA RUBBER WORLD by the insulated-wire men regarding the use of India rubber for electrical purposes having reached its limit. I refer to Mr. Henry W. Johns, president of The H. W. Johns Manufacturing Co. and of the Johns-Pratt Co., patentee of numerous inventions relating to asbestos, controller of the biggest asbestos deposits in the world, and the principal developer of the asbestos industry. While not usually considered as belonging to the India-rubber trade, Mr. Johns's concerns use more rubber than many factories making rubber goods alone. In adapting asbestos to such uses as the making of steam-packing, gaskets, etc., he has found its qualities supplemented to an important extent by India-rubber, and the two materials are vulcanized together, with other ingredients varying with the requirements of different products. Likewise in the electrical field are asbestos and India-rubber used in combination, the heat-resisting qualities of the one being as important, under certain conditions, as the waterproof quality of the other. For all the purposes named Mr. Johns believes that the demand for these materials is growing, and will long continue to grow.

* * *

"WHY," said he, "with all the great development of recent years, we have only scratched the face of the earth. Everywhere in this country preparations are being made for extending existing steel-railway systems as soon as the prevailing political excitement is over, and the other requirements for electrical material are constantly growing, every one of them involving an increased use of India-rubber. Within a year our own business has been much larger than in any similar period in the past, though we feel that business in general suffered a severer blow from the president's Venezuelan message than from the panic of 1893. And in the coming year we expect a still larger growth of business, both at home and in Europe, and all the increase for which we are looking means practically a corresponding growth in our consumption of India-rubber. But we are not, and do not expect to become, buyers of crude rubber, preferring to buy the gum in forms suited to our needs, from manufacturers who are experts in manufacturing it. We pay for some of the rubber we use as much as $1.20 a pound."

* * *

MR. JOHNS spoke so forcibly on the silver question that, although THE INDIA RUBBER WORLD has little space for politics, one expression may be repeated here. "I believe that the free-silver proposition," said he, "will be voted down in November so effectually that it will never be heard of again, in our time. After that, confidence in business circles will speedily be restored and there will be another 'boom.' But the believers in sound money must not take it for granted that their ideas will win, without their presence at the polls."

* * *

SPEAKING of the bicycle-export trade, a rubber-manufacturer, who asked that his name should not be used in print, said: "I do not believe that there is an important field for the export of bicycle-tires from this country. Some tires have been exported—I have shipped some myself to Germany—but I don't know how many have been on orders from purchasers. I am interested in a bicycle-manufacturing concern which has exported a good many wheels, some of which were fitted with the tires of our make, while others were shipped without tires, but fitted for the Dunlop type, which is still so popular abroad."

* * *

"THERE ought to be a fortune for somebody," said R. E. Galleher, secretary of the New York Insulated Wire Co., "in a branch of the crude-rubber industry in Brazil which has been wholly neglected so far. I mean in the treatment of the medium and coarse grades of Pará rubber so as to make them marketable at higher prices than now. Why should the same men, treating the sap from the same trees, send India-rubber to market varying so widely in quality as the coarse and fine Parás? Of all the rubber that comes from Pará only about 60 per cent. is graded as 'fine' and 'medium.' The buyer of the cheaper sorts, by the time the rubber has been cleaned and allowance has been made for the loss in weight, finds that the difference about corresponds to the difference in cost. But since it is purely a matter of cleanliness, it is singular that the matter has not been taken hold of down in the rubber country, and all the rubber made as clean as possible. The difference in price which would result from such a course would pay the operator handsomely, I should think, for the extra work, while the rubber produced would be more satisfactory to the manufacturer than the coarse rubber as now graded, after it has gone through the cleaning process at the factory."

* * *

MR. BANIGAN can still fairly be said to be in the rubber business, as president of the American Wringer Co., in which he is also probably a leading stockholder. This is one Banigan interest, by the way, which was not acquired by the United States Rubber Co. When Mr. Banigan began as a rubber manufacturer at Woonsocket the product of his little factory consisted to a considerable extent of rolls for the Bailey Wringing Machine Co., in the same town, established in 1865. The Woonsocket Rubber Co. grew until all the wringer-rolls in the world would have seemed insignificant in comparison with its outturn of goods, but Mr. Banigan never lost his interest in this particular class of rubber products. In 1891 the leading wringer-manufacturing companies in the country concluded to end a bitter war of competition by becoming incorporated as one concern, known as the American Wringer Co., with $2,500,000 capital, and Joseph Banigan as president. The rubber-roll works of this company and one of its two wringer-factories are located at Woonsocket, and there is reason to believe the consolidated business to have been much more than ordinarily successful. Not only is the use of wringing-machines well-nigh universal in the United States, but nearly every cargo of freight that goes abroad from New York embraces a consignment of them, and by far the greater part of the consumption, at home and abroad, is supplied by the Woonsocket concern.

* * *

"THE paper-manufacturers are among the most important customers for rubber rolls," said B. F. Elson, New York manager for the Boston Belting Co. "They use rolls of a large size, and a great many of them. The paper-mills also require a great deal of rubber belting; in fact, they use the rubber almost exclusively, owing to the great amount of steam with which the belting is likely to come into contact. Although the capacity of the paper-mills in this country is already very large, it is constantly being increased, several mills with which I am acquainted having been enlarged within the present year. It may be safely said that the consumption of India-rubber in the paper industry increased at least in the same proportion as the

productive capacity of the mills." It may be of interest to add, from another source, the recently-published statement that the daily capacity of the paper industry in the United States had increased from 5,000,000 pounds daily in 1881 to 22,000,000 pounds daily in 1895, with an estimated actual production 25 per cent. less.

* * *

THEODORE E. STUDLEY is second to no one in the trade in his appreciation of the commercial and industrial importance of hard rubber, having closely watched the development of its use almost from the date of the first successful experiments of the Goodyears. In his opinion the output of hard rubber is constantly on the increase for its established uses, while new channels for its use are all the time being opened. In answer to a question regarding the effect of the competition of celluloid upon the hard-rubber trade, he said: "The two materials have never come into competition. At least, if the hard-rubber manufacturers have ever suffered from the introduction of celluloid they have not been aware of it. Undoubtedly more rubber combs might have been made if celluloid had never been invented, but no one can say how many more, and, since the production of hard-rubber goods has constantly increased, the manufacturers of the latter have neither reason for present complaints nor fear of a future falling-off in their trade." THE MAN ABOUT TOWN.

## NEW TRADE PUBLICATIONS.

WHOLESALE AND EXPORT PRICE-LIST. STANLEY MORRISON & Co., Limited, India-Rubber and Asbestos Manufacturers, London. [Cloth. 9″×11¾″. 26 pp.]

THIS is the catalogue of a company registered on February 25 last, with a capital of $100,000, to acquire the business formerly carried on by A. S. Morrison at 24 Duke street, Aldgate, London, as Stanley Morrison & Co., and to carry on business as manufacturers of India-rubber and Gutta-percha, electricians, and telegraph and electrical engineers. The reorganization involved the introduction of new capital and the taking into partnership of Basil Gee, well known to the India-rubber and electric trades in England. The Morrison plant long has manufactured asbestos goods extensively, under the "Negrohead" brand. In rubber, an important line of the company's is the "Bear" packing, for steamship and similar uses. The company have also bought the business and machinery of William Blakey, of Greenwich, and will continue the manufacture of the latter's hydraulic packing. But this catalogue embraces almost everything in the way of mechanical rubber goods, except pneumatic tires, though solid tires are listed. Several pages of the book are devoted to hose alone. Besides the standard mechanical goods, the list includes many items in the way of gas-tubing, draught-excluders [which would be called weather-strips in America], door-springs, horse-boots, horseshoe-pads, railway buffers and springs, and Gutta-percha articles. Lawn-tennis balls are also included, the house having manufactured them largely for ten years past. The form of this catalogue differs from that of most American manufacturers, being not unlike a portfolio in size and appearance. It is substantially bound in red cloth, while inside the paper is found to be of a terra-cotta tint and printed with blue ink. The binding seems to have been done with a view to the insertion between the leaves of the book of supplements, and the like, which may be issued later by the company. There is a profuse employment of pictures. Prices are given for each item, with blanks for adding the discounts for either home or foreign orders. The company advertise agencies not only throughout the United Kingdom, but also in Norway, Denmark, Belgium, and Austria-Hungary.

ASBESTOS. DESCRIPTIVE PRICE-LIST, JUNE 1, 1896. H. W. JOHNS Manufacturing Co., New York. [Paper. 4½″×7″. 32 pp.]

ELECTRICAL MATERIALS. [DESCRIPTIVE PRICE-LIST.] JUNE, 1896. H. W. Johns Manufacturing Co., New York. [Paper. 4½″×7″. 32 pp.]

INSTEAD of the occasional issue of a large catalogue of all the products of the company named above, they prefer, on account of the rapid increase in the number of applications of asbestos, to publish frequent editions of several special pamphlets, two of which have lately been received. It is stated that the company's output of trade publications in a year reaches 20,000,000 copies, all of which are distributed gratuitously—representing an outlay which could not long be maintained except on the basis of a very large business. The H. W. Johns Manufacturing Co. now embrace four other concerns which had a separate existence prior to 1891, besides which they sustain close relations with the Johns-Pratt Co. (Hartford)—the manufacturers of "vulcabeston"—and have acquired the molded mica interests of The Gould & Watson Co. (Boston) Hence they represent a practical monopoly of the asbestos business in this country, rendering their catalogues of special interest to any who may be concerned in the use of asbestos. Not the least important of the applications of asbestos is in the manufacture of electrical apparatus, particularly in the use of a combination of asbestos and India-rubber patented under the name of "vulcabeston," which is recommended by the manufacturers in the place of hard rubber. Among other combinations of India-rubber and asbestos noted in these catalogues are "asbestos and rubber cloth," for flat packing; "asbestos and rubber tape," for forming gaskets; and "asbestos and rubber rings and gaskets." These catalogues, like the other publications of the same company, are copyrighted, and illustrations are used wherever they can serve to make the descriptions of goods clearer.

WIRE TABLES AND PRICE-LIST OF THE CLARK WIRE AND CABLES. Eastern Electric Cable Co., Boston. [Paper. 4″×6½″. 12 pp.]

THE insulation used by this company is Henry A. Clark's patent compound, of which India-rubber is the basis, and the wires produced are designed for aërial, underground, and submarine use. This list includes different sizes of wire, with different qualities of insulation, suited for all electrical purposes. There is also listed the Clark joint gum, cut from sheet rubber. This is the tenth year since the company's works were established in Boston, and the new price-list is their No. 11.

CATALOGUE NO. 5. RUBBER ALPHABETS CO., MERIDEN, CONN. [Paper. 7″×10″. 8 pp.]

THE manufacture of rubber type is becoming so extensive as to form, as it were, a separate department in the rubber industry. The concern above named manufactures rubber alphabets for marking prices and signs, in letters in size from two inches downward, together with rulers, gages, etc., to aid in the use of the rubber type. Accompanying this catalogue is a pamphlet of specimen pages, indicating the uses to which the "rubber alphabets" may be put.

### OTHER CATALOGUES RECEIVED.

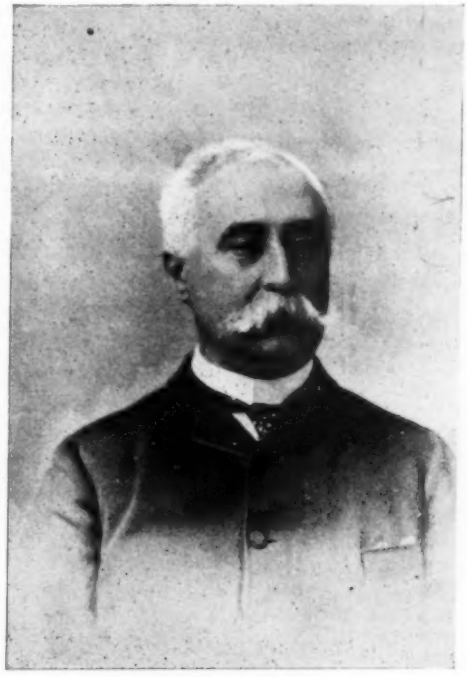
H. W. JOHNS MANUFACTURING CO. (New York.)=Vulcabeston, for Mechanical and Steam Uses. 16 pp.

=New York Belting and Packing Co., Limited.=Save Your Preserves [relating to fruit-jar rings.] 4 pp.

=General Electric Co. (Schenectady, N. Y.)=Electric Wires and Cables. 30 pp.

# THE LATE MR. ABECASIS AND THE RUBBER TRADE.

THE conditions of the crude India-rubber trade at the beginning of the rubber-manufacture on a large scale were widely different from those now prevailing. For years afterward the most usual method of disposing of the cargoes of Pará which from time to time reached New York or Salem was for the ship owners to notify the buyers for the rubber factories of the arrival of some rubber, when they would assemble at the ship's office, hear how much rubber was on hand, and what was the price. Their orders were usually placed on the spot. An incident illustrating the rigidity of prices maintained by the rubber importers is related by Mr. Frederick M. Shepard. Mr. Corning, a leading importer of rubber in New York, received some rubber from Pará one day, and invited the presidents of the rubber companies to call at his office. Jonathan Letson, of the New Brunswick Rubber Co., who was among the number, thought that the price was too high, and declined to place an order. In a short time, however, the stock at his factory needed replenishing, and he went to Mr. Corning, who quoted a price higher by 2½ cents a pound. Declining to pay this, Mr. Letson waited until his needs were pressing, and again went to Corning, who made another advance of 2½ cents. Letson meanwhile had borrowed from other manufacturing concerns all the rubber they could spare, and he now went to the Union Rubber Co. and asked their Mr. Wilson, as a favor, to go to Corning and buy rubber in his own name, for the New Brunswick factory. He thought that Wilson might be able to buy at the original price, and so he was. Mr. Corning's advance in the case of the one concern was, so to speak, his method of disciplining a member of the trade who dared make an objection to his prices.



JULES S. ABECASIS.

The leading importers of India-rubber in the United States under the old régime were Capt. Ephraim Corning, who commanded his own schooner in the trade with Pará, and was succeeded in turn by his son, H. K. Corning, and his grandson, E. L. Corning, all of whom amassed fortunes in rubber; James Bishop & Co., G. Amsinck & Co., and Burdett & Noble—all of New York. Then there was a considerable trade at Salem, Mass., at one time, in which Captain John Bertram and the Pingrees and Uptons were engaged.

It will be seen that the crude-rubber business was in few hands, and that the holders were disposed to be very independent in the matter of prices, so long as manufacturers bought direct from the importer. But a change came with the era of the rubber brokers, of whom the first to work on an important scale was the late Jules S. Abecasis, whose death was briefly noticed in the last INDIA RUBBER WORLD. The date of Mr. Abecasis's first operations in rubber here cannot now be stated, but the first appearance of his name in the New York city directory was in the volume for 1854, when he was located at No. 124 Maiden lane. The next year he went to No. 120 Water street, and afterwards successively to No. 101 Wall, No. 148 Pearl, and No 41 Beaver, and finally to No. 17 William street. Mr. Abecasis wrought a change in the conditions of the market by cultivating the acquaintance of manufacturers, becoming familiar with their needs, and booking their orders for rubber to arrive. Having found a market for rubber, he would then arrange with commission houses who had not previously handled rubber to become importers, the result of which was that the demand for rubber from the regular importing houses gradually fell off, while the trade controlled by Abecasis as steadily increased. At one time his operations were very large. The Union Rubber Co. more than once gave him orders for 500,000 pounds of Pará rubber, and practically all the rubber in this market at one time passed through his hands. In the course of time, however, he in turn had competitors, there were new elements and new conditions in trade, and his transactions in rubber came to be confined chiefly to filling orders from a few older members of the trade who had been buyers from him at the beginning of his career. By the way, the testimony of these is that Mr. Abecasis was a man of the highest integrity, and emphatically one whose word was as good as his bond.

Mellville D. Landon (Eli Perkins), when asked about Mr. Abecasis, said to THE INDIA RUBBER WORLD:

"None of his friends up-town knew much about the business of the great rubber importer. When I first met him, twenty-seven years ago he was called the 'King of the Rubber Trade.' He then had the finest cottage at Long Branch when Ocean Avenue was the Champs Elysée of the beach. His four-in-hand was in evidence at the races as the first four-in-hand in this country.

"Mr. Abecasis" continued Mr. Landon "made his fortune and retired to social life. His town residence was on West Forty-sixth street, where he entertained sumptuously. He was a member of the Lotus Club and was always to be seen in the Vaudeville Club at the Metropolitan Opera House on gala nights.

"In regard to his religious status," said Mr. Landon, "he was a Hebrew, but not of the modern kind. His father was a very wealthy and cultured Spanish Jew and lived in Gibraltar. His son Jules was born in England and came to New York forty-five years ago. He went into the rubber importing business and rose step by step until he controlled cargoes coming from Pará. He was so respected by the aristocratic Jews that they made him President of the aristocratic Nineteenth street Synagogue and continued to elect him year after year for nineteen years. He had much to do with such charities as the Mount Sinai hospital and The Montefiore Home. He loved

sports and finally at the age of sixty-seven died on the bicycle. Christians and Jews went to his funeral and saw him laid away in a beautiful spot in Cypress Hill Cemetery. His rooms while he was dying, were filled with flowers and he died surrounded by loved and loving friends."

"It has been stated that Mr. Abecasis was a famous languist," was remarked.

"Yes, he spoke fluently Portuguese, German, Spanish and French. He was a great favorite among the Greek colony in New York. The Greek, Italian, Spanish and Turkish Consuls were his friends. He was a handsome man, always polite and chivalric, and generous in society and benevolent in charity."

## RUBBER CONCERNS AT WOONSOCKET.

THE annual meeting of the stockholders of the Marvel Rubber Co. was held at Providence, R. I., on July 13, at which time Joseph Banigan, president, and William B. Banigan, general-manager, tendered their resignation as directors. This company was organized a few years ago for the manufacture at Woonsocket of a patented rubber shoe known as the "Marvel," and its business was acquired by the United States Rubber Co. together with Mr. Banigan's other interests. At the meeting referred to a new board of directors was named, being the same as that of the Woonsocket Rubber Co., viz.: Col. Samuel P. Colt, Fredrick C. Sayles, George A. Lewis, Hezekiah Conant, and Emmett A. Saunders. The officers elected were Emmett A. Saunders, president; Fredrick Cook, treasurer; and Clarence Guild, secretary. No choice was made at this meeting of a general-manager, and W. B. Banigan has since continued to fill the position. The shut-down of the Marvel works began on July 18. The company are said to have orders in hand which must be filled before September 1.

Superintendent A. L. Comstock, of the American Rubber Co. (Cambridgeport, Mass.), has been appointed assistant to General-Manager Emmett A. Saunders, of the United States Rubber Co. He is to have special supervision of the Cambridgeport, Bristol, Woonsocket, and Millville works, and in respect to the latter two he succeeds John J. Banigan, late general-manager of the Woonsocket Rubber Co.

Maurice C. Clark has retired from the position of superintendent of the Millville mill of the Woonsocket Rubber Co. In an interview in a local newspaper he is reported as saying that he tendered his resignation early in June, to take effect upon the appointment of a successor; that his purpose is to engage in the manufacture of some cotton machinery which he has invented; and that he had recommended his assistant, James Gray, for the position of superintendent. The first rumor respecting Mr. Clark's retirement was to the effect that he meant to join Mr. Banigan in a new rubber factory, but he tells the Woonsocket *Call* that he does not believe that Mr. Banigan would engage in the rubber business again. General-Manager Saunders stated to the same newspaper that Mr. Gray would look after affairs at Millville, at least for the present. It has since been announced that the position would be filled by A. D. Warner, lately of the Wales-Goodyear factory, at Naugatuck, Conn. This, by the way, is the factory at which the Woonsocket boots are made. It has a capacity of 8000 pairs per day, and not a shoe is made in the place. Frederick T. Comee, superintendent of the "Alice" mill, at Woonsocket, will remain in that position. The latest report of all is that Mr. Comee will be superintendent of both mills.

Notices were posted on July 10 at the Millville and "Alice" factories of a three-weeks' shut-down, dating from July 18, in the case of the former and from July 25 in the case of the latter. It is understood at Woonsocket that, after this shut-down, the factories will run steadily until March. The notices did not announce an abrupt cessation of work, but were posted for several days in advance in order to give the employés time to arrange matters. Besides, a definite date was given for the resumption of work. The decision to close the mills was reached at a meeting of directors of the Woonsocket Rubber Co. on July 8. President Colt had already been reported by the Providence *Journal* as saying that the company, should they study their own interests, would remain idle until late in the fall, but that the vacation would be limited to three weeks out of consideration for the operatives. A later report is to the effect that the Woonsocket company have received the largest order in their history—enough to keep the "Alice" mill going for months on full time after the shut-down.

Referring to the belief in some quarters that the management of the United States Rubber Co. had discriminated against the Woonsocket factories in the distribution of work, on account of some feeling against Mr. Banigan, the Woonsocket *Reporter* takes pains to assert that the new president of the Woonsocket company—Colonel Colt—has a prestige with the general management that will preclude any such course in future. In this connection the *Reporter* says: "Owing to the exceptionally poor winter for rubber business—in fact the past three winters have been dull ones—a large surplus of manufactured goods has accumulated, sufficient for a year's ordinary demand. The left-over product from the Woonsocket and Millville works is larger, proportionately, than from any of the other plants. But, despite this, the works will be run for future orders the same as though there was no difference."

The American Wringer Co., at Woonsocket, are building a three-story brick addition to the two-story mill erected several years ago. As business is good, the company have been anxious to keep running without any stop on account of the building operations. It was also planned to add a third story to the main building. The problem was how to remove the existing roof, raise the walls one story, and replace the roof without shutting down. Superintendent M. M. Flynn removed the old roof by sections and put it on the new building, and had a new roof built on the main structure after adding a story.

* * *

GOSSIP about Mr. Banigan and his plans for reëntering the rubber industry continues with unabated activity. Horace A. Kimball, who owned the woolen machinery lately removed from the Saxon mills, near Providence, says that the premises now belong to Mr. Banigan, and it is still averred in Woonsocket that the Banigans soon will be making rubber shoes there. Mr. Banigan was at Providence on July 20, where he was interviewed by the *News*, with this result: "When asked if he had anything to say about rubber, the man who is keeping the whole trade guessing replied unhesitatingly that it is the gum of a tree and very elastic. He had nothing to say about his own plans in dealing with the gum nor about the mill property at Olneyville which he has recently purchased. On other subjects, however, Mr. Banigan was more communicative. He will not vote the Democratic ticket, and denounces the Chicago platform. To-night he will leave Providence for Salt Lake City and, after a fortnight in the west, expects to have something to say about the silver sentiment."

The new Banigan building, at Providence, is described as a sky-scraper, and is expected to be ready for occupancy early in the new year. Among the tenants will be the American National Bank and the Postal Telegraph Co. Mr. Banigan has been reported lately to have been the purchaser of one of the most desirable hotels at Naragansett Pier.

# A TALK WITH MR. W. D. ALLEN.

THE representative of THE INDIA RUBBER WORLD recently called on W. D. Allen & Co., Chicago, and had an interesting talk with Mr. Allen, the president and treasurer of the concern. An account of the company's organization and development was likewise obtained.

W. D. Allen & Co. succeeded the old firm of E. B. Preston & Co. in 1886, the business having been originally established by Mr. Preston in 1869. Mr. Preston was the well-known rubber man who represented the interests of the Myer Rubber Company for the United States Rubber Company in Chicago. From his estate, after his death, the W. D. Allen & Co. purchased the bicycle factory and the brass foundry which they now operate in connection with their rubber business.

W. D. Allen & Co. conduct three manufacturing departments —leather belting, which is carried on on the upper floors of Nos. 151-153 Lake street, a packing factory, and a brass foundry. They have been for years the distributing agents, at Chicago, of the New York Belting and Packing Company.

The packing factory enjoys the unique distinction of being ths only manufactory of its kind west of Pittsburg. The packings are made exclusively for the jobbing trade. The product of this factory consists of braided flax packing and gum core packings of various sorts. The flax packings manufactured are of one grade only, which they brand "Arrow." This is of superior quality and is said to compete successfully with the oldest and best known brands on the market. Special machinery is used in the packing department, particularly in the manufacture of flax packing. All of the machinery in use having been entirely remodelled at considerable expense, the department is an interesting study to visitors. The flax packing is the result of over two years' experience and effort. The company has been so successful that it has been able to "carry coals to Newcastle," —to make large shipments of packing to Philadelphia and Pittsburg, which are supposed to be the home of the flax packing business.

The product of the brass foundry is principally the class of goods known as hose trimmings, brass couplings, play pipes, etc. The company manufactures the well-known Automatic Hose coupling used by the fire department of Chicago exclusively and by most of the western fire departments. Among other goods well known to the trade manufactured by this company are the Magic Hose Nozzle, the Cyclone Revolving Sprinklers, etc.

The capacity of the company's belt shop has very recently been doubled, there being to-day facilities for making leather belting up to and including 72-inch belts. There are perfect arrangements for repairing leather and rubber belts, serviceable belts being made out of what some people would consider worthless material.

The bicycle factory is in some respects a distinct organization, but the management is practically the same as that of the Lake street house.

It is no accidental arrangement which makes the W. D. Allen & Co. a three-fold manufacturing concern. One branch has naturally led to and necessitated the establishment of another. It is the policy of the company to carry in stock everything required in the shop and engine room. Customers find it convenient and economical to open an account with one house instead of several, and it pays the manufacturer to supply everything called for in connection with his principal articles and thus save the profit which would otherwise go to another manufacturer.

For the last two seasons the company have sold large quantities of rubber hose and rubber belting to contractors for use on the Drainage Canal of the Sanitary District of Chicago, which is constructing a channel which will, in some respects, surpass any ever built by man. As the work is of the roughest kind, the belting used had to stand the severest test. The work done was the transmission of rocks and dirt, and on the suggestion of Mr. Allen, the American Hydraulic Dredging Company adopted the company's 22-inch, five ply, extra quality rubber belt. It was about 1200 feet long—perhaps larger than any rubber belt ever used elsewhere. The contractors attribute their success in achieving the highest results in conveying

efficiency to the construction and quality of the belt furnished to them. In canal excavation and in placer mining this belt will doubtless be largely used hereafter.

The company have always emphasized the rubber department of their business and have steadily extended and increased it. The members of the firm are all young men, and the management is in the hands of Mr. Allen, Mr. E. H. Pease, and Mr. C. F. Bowes. Mr. C. W. Lynde is in charge of the mechanical rubber goods department. All are hard workers and aggressive business men.

In regard to the business situation, Mr. Allen said that the canvass of the rubber trade in Chicago in the last issue of THE INDIA RUBBER WORLD completely covered the ground in regard to belting, packing, bicycles and hose.

Business continues to be light and depressed, all manufacturing industries suffering from general causes. Ever since 1892, —which was the best year in the rubber trade,—it has been a hard up-hill fight with all branches of the rubber trade, and while W. D. Allen & Co., have held their own and steadily increased their manufacturing department, things are not as they might be. If conditions improve next fall and confidence is restored, a great improvement may be expected in the rubber trade.

"We have large plans for the coming trade year," said Mr. Allen, "and fully expect to make our influence felt, not only in the rubber business, but also in general supplies, as we deal in fittings and engine room goods of every kind."

Asked to specify what, if any novelties, the company have in contemplation, Mr. Allen said that while he was not prepared to make definite announcements, he was ready to say that they would have something new in more than one line. Particular attention will be paid to the packing department. The advantages of having their own packing factory are obvious. The company have new facilities for manufacturing, in addition to their special brands, any kind of special packings customers may desire. Often irregular kinds or sizes are desired, and it is important to be able to manufacture them at short notice.

There was, Mr. Allen thought, a growing demand among engineers for higher grades of packing. Some ask for the highest that can be produced without regard to cost, and to meet this demand, they have successfully put upon the market their Skull and Bones Steam Piston Packing. It is made of the best cotton fiber on a round rubber core. There is also an extra quality of sheet packing branded "U. S.," which is of superior quality of rubber with cloth insertion.

The representative of THE INDIA RUBBER WORLD had the privilege of inspecting the packing and belting departments and seeing the machines and men at work.

## GOODYEAR RUBBER CO. CHANGES.

THE Goodyear Rubber Co. have been of late carrying out a policy of concentration, due largely to changes in the conditions of business in general. For instance, their Buffalo branch-house has been consolidated with the main establishment at No. 787 Broadway. Twenty-five years ago, when the branch-house was opened, Buffalo was a "Western" city, its situation on the lakes giving it a position of importance as a distributing point for the trade of the middle western states. To-day, while the trade of Buffalo is larger in volume than at any time in the past, its relative standing as a rubber-trade center has changed, so that it has been thought wise to consolidate the stocks carried there with those in the New York store, and to remove the headquarters of the salesmen traveling in that territory to New York city. The immediate cause of the change is two-fold—the failing health of Mr. E. A. Rockwood, who has represented the company in Buffalo for twenty-five years, and the recent burning out of the Buffalo store, already reported in THE INDIA RUBBER WORLD. Mr. Rockwood's connection with the rubber trade in Buffalo has extended through more than twenty-five years, he having begun business as a rubber-goods dealer on his own account at an earlier date, after which he took in a partner, under the style of Rockwood & Burr. Even then he represented the Goodyear Rubber Co. in Buffalo. In August, 1871, he became the manager of the company's branch-house established at that time. The company will maintain in Buffalo hereafter an office and sample-room at No. 48 Exchange street, in charge of C. H. Atwood, who has been for some time past Mr. Rockwood's principal assistant.

In New York the plan of consolidation involves the closing of the branch at No. 17 Murray street, devoted to the sale of druggists' and other sundries, so long in charge of Mr. Theodore E. Studley. A pleasant incident which may be recorded here is the recent resumption of a correspondence with Mr. Studley by the managers of a renowned foreign house in the perfumery trade, with which he had some business relations before becoming so closely identified with the India-rubber trade as in recent years. Being desirous of becoming more adequately represented in America, the foreign house made a proposition to Mr. Studley which he has accepted, and his retirement from the rubber trade has led the Goodyear Rubber Co. to add the stock in the Murray-street store to their uptown house. The long career of Mr. Studley as a rubber-man was treated fully in THE INDIA RUBBER WORLD of March 10. All the members of the trade who knew him will regret to miss this veteran "sundries" dealer from the post at which he has so long been a familiar figure.

The appointment of Mr. Richard H. Pease, the Pacific-coast manager of the Goodyear Rubber Co., as general selling-agent on the coast for the United States Rubber Co., has already been noted in this journal. He is now fairly in charge of the new business which this change places in his hands, in addition to the general business of the Goodyear Rubber Co. The large five-story building, 40 × 200 feet in size, adjoining the Market-street store of the Goodyear company in San Francisco, is now occupied by the United States company. Mr. Pease now uses two forms of stationery, showing him to be respectively general-manager and vice-president of the Goodyear Rubber Co., and general selling-agent on the coast for the big rubber-shoe concern.

Another item of news respecting the Goodyear Rubber Co. is that they have installed in their factory at Middletown, Conn., a large new steam-plant, of the most improved construction, to replace the boilers and engines so long in use, incidental to which some new building has been necessary. In addition, it is probable that the need for extra room will lead soon to some more building operations. The Middletown plant has resumed work after the shut-down made necessary by the installation of the improvement mentioned.

SOME experiments on the pneumatic tire, described by M. Michelin at a recent meeting of the French Society of Civil Engineers, showed that on a very hard and smooth surface and a very slow speed there was little or no advantage, so far as friction was concerned, in the pneumatic system. As soon, however, as the pace was increased, the pneumatic tire quickly asserted its supremacy, its superiority being still further enhanced in the case of rough roads. These results are, of course, quite in accordance with the theory of rolling friction.

## RUBBER NOTES OF INTEREST FROM CANADA.

A COMPANY which is to bear a name that has a very familiar sound to Americans, the New Brunswick Rubber Co. (Ltd.), is about to be formed in St. Johns, N.B., for the manufacture of the Davis-Miles Nonslippable Rubber footwear. The mail brings us the prospectus of this company, the first page of which gives an illustration of a well-fed, happy-looking gentleman, walking with perfect security upon an icy sidewalk while all about him are unfortunate creatures falling and fallen because there was no emery in their shoe soles. Under the heading "Our Invention," the inventors after stating that they have produced the greatest boon to mankind since that sewing machine was discovered, namely, rubber footwear that will not slip anywhere, that will wear twice as long as ordinary rubber shoes and that will cost less to manufacture, go on as follows:

"All people who travel much know the dangerous condition of the streets, cars, sidewalks, steps, etc. Brakemen now use on an average two pairs of rubbers a week. Our invention and composition rubber will be the greatest boon to trainmen, travelers and the ordinary citizen ever discovered. How many fatal accidents have occurred from trainmen slipping from the tops of cars? With our rubber footwear this is impossible, as they can walk with perfect safety on cars covered with ice. creepers are done away with. You don't need any ice stick to support yourself with, but with our rubber you can walk with perfect safety anywhere there is danger of slipping.

"The consumption of rubber footwear in the lower provinces alone is estimated at one quarter of a million dollars ($250,000) per year. In Canada there are in round numbers about 6,000,000 rubbers manufactured every year. We simply point out this fact to show that there is an assured market for our rubber footwear.

"The consumption of rubber footwear manufactured under our patent, No. 50,930, will be enormous. The common rubber will be driven from the market. Why? Because no one will wear them when they can buy for the same price a rubber footwear manufactured under the Davis-Miles patent, that will not slip on ice and, because of its composition, will wear twice as long. We have practically demonstrated the nonslippable qualities of our rubbers and their wearing qualities, and have found that our composition rubber footwear will do all that we claim for it.

"A Canadian Rubber Co., with a rating of $1,500,000, declared a dividend January 1, 1896, of 19%. The net earnings of the United States Rubber Co., since April 1, 1895, have been, as declared by its treasurer, $7,750,000. Of the $250,000 worth of rubber footwear sold annually in the lower provinces, say at 20% profit, realizes for the manufacturer $50,000 on capital invested for one year. A company with a capital of $150,000, at these figures, would pay its stockholders, $30,000 yearly. A good investment, surely.

"We propose to sell an interest in our patent, or to form a company. The town or city holding out the greatest inducements to us will surely see a rubber factory among its industries. We will sell outright or on a royalty plan. A rubber factory would employ 300 or 400 hands. The Maritime Provinces offer exceptional advantages for an industry of this kind. Our harbors are approachable at all times of the year. We have low rates of freight. We are 500 miles nearer the source of supplies than Montreal, to say nothing of Upper Canada. The Maritime Provinces would consume $250,000 worth of rubbers in one year. We propose to start a company, say capitalized at $150,000, at $50 per share,—that is 3000 shares; erect or buy suitable buildings; put in machinery, and place our goods on the market next fall. Large wholesale dealers have assured us of large orders when our rubber is on the market. The people won't buy any other rubber except the Davis Miles Non-Slippable Rubber Footwear.

"There is a tide in the affairs of men
Which taken at its flood, leads on to fortune."

"Remember a Canadian Rubber Co. pays 19 cents on every dollar invested, and the consumption in the Maritime Provinces amounted last year to $250,000 worth. With only three rubber factories in Canada and none this side of Montreal, the lower provinces offer a splendid opportunity for the establishment of a rubber factory.

"To sum up: The Maritime Provinces should have a Rubber Factory. A Rubber Company using the Davis-Miles patent rubber composition and rubber footwear will control the rubber shoe trade of Canada. Remember a Canadian Rubber Co. paid last year 19%. Only three rubber factories in Canada and nearest one to the Maritime Provinces is 500 miles away. What town or city is going to reap the benefit of our patent?"

The letter head of this company has a picture of a fine looking factory plant which careful inquiry has failed as yet to locate, while credible parties in St. John affirm that as yet the factory is only on paper. The promoters however, fail to state this on the letter heads.

It has always been the policy of THE INDIA RUBBER WORLD to encourage as far as possible any legitimate scheme in rubber manufacture. The more successful factories there are, the better we are pleased. This project seems to us not only faulty as a business scheme but full of errors. For instance, a rubber compounded with emery will not last twice as long as one made up of the usual compounds. The very fact that the sole is loaded with sharp particles will tend to make it wear away quickly. Nor can it cost less to manufacture. Emery can never be cheaper than whiting, and if used in any such quantities as whiting, in an ordinary sole compound, it would give a result as hard as stone. The statement that there are in round numbers about 6,000,000 rubbers manufactured in Canada yearly, will be read by the unthinking as meaning six million pairs, whereas the fact is there are something less than three million pairs manufactured annually. It says further, that a Canadian Rubber Co., with a rating of $1,500,000, declared a dividend January 1, 1896, of 19%. There is only one company in the Dominion with so high a rating. That is the Canadian Rubber Co. Their semi-annual dividend declared January 1, 1896, was 4%, their semi-annual dividend one year ago was 3% and investors have only to write to Montreal to find that this is a matter of record and of common knowledge. Further than this, the patent on which Davis & Miles are working is almost identical with an old but exploded one. Some six years ago James Leggett, a well known boot and shoe jobber, of Montreal, obtained a patent in Canada for a shoe compounded much as this is, and not only that, but had hundreds of pairs of these shoes made by the Canadian Rubber Co., ran them as specialties for a year, pushing them far more than the regular goods, and at the end of that year's experience acknowledged that the idea was without practical value. In thus frankly analyzing the St. John project THE INDIA RUBBER WORLD is actuated only by the kindest feelings toward the Davis-Miles Co., as well as toward possible investors. Were any of the parties interested practical rubber manufacturers, they would see only a loss of money in such a venture.

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## A RUBBER FACTORY FOR BOWMANVILLE, ONT.

A NEW rubber company that has recently been started in the town of Bowmanville, Ontario, has for its promoter Mr. Charles A. Clark, who was formerly superintendent of the Combination Roll and Rubber Co., of Bloomfield, N. J., and later with the Alpha Rubber Co., Montreal. According to the report of

parties who have followed the project, $30,000 have already been subscribed for the business, and in addition, the town of Bowmanville has subscribed $8000 by way of a bonus, or loan, and further, has agreed to remit its taxes for a term of years. The concern will manufacture mechanical rubber goods, and druggists' sundries. The promoters, in addition to Mr. Clark, are William E. White, of Toronto, and prominent business men in the city of Bowmanville.

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## A RUBBER SHOE FACTORY FOR TORONTO.

ONE outcome of the war between the directory of the Toronto Rubber Shoe Mfg. Co., and the jobbing house of Harvey, Van Norman & Co., was the wish on the part of the latter to have a line of rubber shoes made in the Dominion for their own special trade. It was therefore an open secret that they approached H. D. Warren, the president of the Gutta-percha & Rubber Mfg. Co., and were exceedingly anxious that he should go into the manufacture of rubber footwear. Mr. Warren is a man of progressive ideas and he therefore looked into the matter carefully but without a decision in the affirmative and while he does not say to-day that Toronto is not to have a rubber shoe factory, he disclaims any immediate intention of building one.

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## ANOTHER MONTREAL RUBBER SHOE FACTORY.

IT is said that Mr. James A. Young, formerly of the Toronto Rubber Shoe Co., Mr. C. L. Higgins, and Mr. Westgate of the Hudson Bay Knitting Co., Montreal, are at work on a plan for a rubber shoe factory to be located at the latter city. It is said further, that they had made arrangements with the United States Rubber Co., to purchase the rubber shoe machinery now idle at Franklin, Mass., but that some clause in the original bill of sale has interfered with that transaction.

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## THE GUILLINE PNEUMATIC COLLAR CO.

A NEW and extremely interesting industry, about to be started in the city of Granby, Quebec, will bear the name that heads this article. The plant, which will be in operation by the time this goes to press is specially designed for the manfacture of high grade horse collars. A special type of collar that the company will market will be a pneumatic collar, that is, instead of being stuffed wholly with straw as is usual, the collar will have two long air bags, made rubber which when inflated adjust themselves very easily to the horse's neck, and not only make the collar one-half lighter than is usual, but infinitely more durable. These goods are made by special machines designed for this work by Mr. Guilline, general manager of the company, the rubber bags being furnished by the Canadian Rubber Co , of Montreal.

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## UNDER THE "WINDING-UP ACT."

IT will be remembered that some little time ago, THE INDIA RUBBER WORLD chronicled the formation of a company in Canada for the reclaiming of old rubber. The special promoter of that scheme was Charles J. McDermott, whose persuasive eloquence led certain worthy capitalists in the Dominion to believe that the enterprise would be a most profitable one. Mr. McDermott remained with the company but a short time after the plant was installed, and then returned to the States. The capitalists, however, having invested some $30,000, it is said, in the venture did their best to make it profitable. In that they were so unsuccessful that very recently the company, which was known as the Dominion Rubber Reclaiming Co., Ltd., went into liquidation under what is known as the "winding up act." The business was sold in the block and it is said was purchased by one who was formerly interested in the company. It is further announced that he is willing to sell the plant and machinery for about one-sixth of the original cost.

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## TALK OF NEW FACTORIES IN CANADA.

THE air is full of rumors about new rubber factories. There is some talk of a factory in St. Stephen, N. B.; another in Bowmanville, Ont.; and in St. Johns, N. B., there is talk of one also. The latest we hear is of one in Perth or Ottawa, in which Mr. James Young, formerly with the Toronto Rubber Shoe Co., is said to be interested. Then we have the talk that is going on the street about the local concern that was formerly interested in the Port Dalhousie factory, having rubbers made by another India-rubber and Gutta-percha house for their own trade.——Mr. R. H. Green, of the Toronto Rubber Shoe Manufacturing Co., informs us that the auction sale of rubbers this fall will not amount to much. No firsts whatever and but few seconds will be put up.—*Canadian Shoe and Leather Journal.*

## ELASTIC TRACES.

THE careful observer of vehicles and horses in the streets of New York and probably of many other large cities cannot have failed to notice the growing use, in connection with the draught gear, of strong, spiral springs so disposed as to give considerable elasticity to the whole outfit, and designed to lighten the work of the animals in hauling heavy loads. Just where the idea of thus applying springs, and to so good a purpose, originated we do not recall, though we believe that it has been credited to a French engineer, M. Celler, of the Department of Bridges and Roads.

Every one has, no doubt, at some time noticed that a horse is often obliged to use all his weight and strength to start a vehicle which moves along easily enough when once set in motion, and it is quite conceivable that springs in the harness or in the draw bars of street cars, for example, where they are now used, might make the work easier by distributing the movement of starting over a larger period of time. Probably among the first who availed themselves of the suggestion of employing springs in this manner was the Eastern Railroad of France who, about eight or ten years ago, began to harness all the horses employed in shifting freight cars at their Paris station with traces made of chains having strong, spiral springs inserted in them. A large number of horses was at that time, and is still, employed in this service at the station in question, and the effect of the change was generally understood to have been very satisfactory. A considerable gain was said to have been made in the durability of the harness, and the regularity of the work, through the diminution of the number of chains broken in the service. The horses, moreover, were said to do their work better and with less fatigue.

The blow of the collar on the shoulders at starting, it is argued, is far less violent, when using the spring gear, and less injurious to the animal than with the old system, and the horses, finding that a strong, continuous pull will effect as much as the jerk which was formerly necessary, are said to pull steadily and directly and do not waste their strength in ineffectual plunges. At any rate the spring gear has apparently come to stay; in fact, from the relatively small beginning above noted, its use has extended until now the elastic trace has almost ceased to be a novelty.—*Mechanical News.*

# THE INDIA-RUBBER INDUSTRY IN EUROPE.

AT a half-yearly general meeting of stockholders of the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, in London, on July 7, it was resolved to pay an *interim* dividend of 2½ per cent., or 5s. a share. The amount of business was stated to have been larger since January 1 than during any former half-year, by at least 10 per cent., but on account of the recent advance in crude rubber the profits had been slight. The company had laid a number of cables in Cuba, and had received pay for them. They had also laid a cable between England and Germany. The works of the company were in good condition, and a continued increase of business was expected.

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THE latest report of the Austrian-American Rubber Co. (Vienna-Breitensee) shows that the favorable indications with which the year 1895 opened were fully realized. The factory was employed to its full capacity throughout the year; business increased materially; and the same was true of the profits, although concessions had to be made in the prices of mechanical goods to maintain the former business transactions. The rubber-ball convention (regarding prices) has asserted itself favorably. The pneumatic-tire manufactured by the company obtained a dominant position in the market. In spite of the fluctuating prices of crude India-rubber, the company were enabled to secure the necessary material as needed and on reasonable terms. The future has been arranged for in this respect, inasmuch as the company, in conjunction with the Continental Caoutchouc and Gutta-Percha Co. (Hanover) have had a steamer built to go to the Amazon river to buy the raw material direct. To keep pace with the increasing business, the rubber factory of Hugo Froreich, in Visocan, has been bought, with indications of an increasing and lasting prosperity. The gross profits of the company amounted to 253,068 florins (=$101,733.33), which, after the several transcriptions had been made, left a net profit of 204,305 florins (=$82,130.61). A dividend of 16 per cent. for the business year was declared. The total reserves of the company now amount to 129,097 florins. The capital stock has been increased to 1,100,000 florins (=$442,200). Business for the current year has progressed satisfactorily, and a favorable result is expected.

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THE business report of the Hanover Caoutchouc, Gutta-Percha, and Telegraph Works (Linden, near Hanover) shows that the profits for the year 1895 amounted to 365,050 marks, against 234,035 marks for 1894. After deducting the general expenses a profit of 91,830 marks remains, against a loss of 16,536 marks for 1894. After providing for the proper transcriptions and deductions of losses on outstanding bills of former years, there was a net gain of 35,007 marks (=$8752) to apply against the shortage in the balance. The entire business has increased 30 per cent. over 1894. The good showing here outlined was made in spite of the fact that estimates had to be made in conjunction with high prices for raw materials, without any material rise in the selling prices. The works are busily engaged this year and record a larger business at better prices.

* * *

THE United Berlin-Frankfort Rubber-Goods Factory Co. report, for 1895 that the works have been satisfactorily employed, those at Berlin and Grottau especially. The branch at Gelnhausen made an unsatisfactory showing. Universally higher prices of crude rubber and sharp competition created lower prices of staple articles. The export business, likewise, required increased efforts, and in order that all possible attention might be paid to it, a special export sales-room was established. The gross profit attained was 160,969 from which there were transcriptions to the amount of 52,806, so that a net profit of 108,162 marks (=$27,041) remained. The stockholders received a dividend of 6 per cent. The current year appears very promising, as prices of raw material are more favorable, and the three factories are working to their full capacity.

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THE business report for 1895 of the Cologne Rubber Thread Factory announces that on account of the fluctuations in the prices of the raw material for the past few years, it has been impossible to make the usual showing of profit. Only by increased care and the addition of several work-rooms, which will be completed in the year 1896-97, has it been possible to so increase and dispose of the product as to declare a dividend of 6 per cent.

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THE Hanover Rubber Comb Co. at the last meeting declared a 16 per cent. dividend. The capital stock was increased.

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THE Saxony-Bohemia Rubber Goods Factory, Stock Co. (Dresden-Löbtau and Bünauburg in Bohemia) exhibited at the Berlin industrial exhibition, an original and interesting spectacle to the visitors, in carrying on the manufacture there of their "Imperial" pneumatic tire on a large scale. It was to be seen in all stages of construction, from the first treatment of the raw material to the turning out of the perfect tire, besides which drawings and photographs of the processes were shown. A map giving prominence to those countries in which India-rubber is gathered and photographs and pictures of scenes in the primeval forests, of the gathering and smoking of crude rubber, were also exhibited by this firm. Then followed a photographic description of the requisite machinery, such as rubber washers and mixers, calenders, tubing-machines, vulcanizers for tires, and bobbin-machines for the manufacture of their patent lace insertion. Finally, there were views of the factories in Dresden-Löbtau, and Bünauburg, and also of the Dresden workshop of the "Imperial" tires. In a like systematic arrangement was to be found on the tables a show-case containing various samples of crude rubber, with notes respecting the country of their origin; Pará rubber, in all its stages, as used for the "Imperial" tire; the same drawn in sheets and threads, and stuffs for the insertions. This company seemed to aim at prominence not so much in the magnitude of its exhibit, as through the ingenious and fascinating arrangement, to obtain which it has spared neither time or money.

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BICYCLE-WHIPS of Gutta-percha, which might be available also as riding whips, are marketed by the Harburg Gutta-Percha Goods Factory of Renck & Broocks. The whips are overspun and of elegant design, and are of a quality retaining their high elasticity at all temperatures, as well as the necessary rigidity.

* * *

A CARRIAGE with pneumatic tires was shown at the Hungarian millennial at Budapest, by the Styria bicycle works, of Joh. Puch & Co., and created quite a sensation. It was drawn by four horses when exhibited before the Emperor of Austria, who took great interest in it.

THE United Berlin-Frankfort Rubber Goods Factories (Berlin and Gelnhausen) distributed among the visitors to the Berlin industrial exhibition a very neat little pamphlet of 16 pages, entitled "Popular Account of Caoutchouc and the Caoutchouc Industry." This was done with a view to giving proper ideas of this industry, and the difficulties connected therewith, as well as to introduce their products more generally. One object of the compiler of the pamphlet was to show that cheapness is a thing to be avoided in the rubber industry, as low prices and inferior quality are inseparable. A plan of the exhibition grounds, marking the location of the exhibit of this firm in the main building, is contained in the pamphlet.

* * *

LOUIS WERTHEIM & CO., Frankfort o/M., recently celebrated the completion of their new asbestos factory at Niederrad. Mr. Wertheim arranged for the 400 employés of his Bornheim factory—in existence for the past twenty-four years—a brilliant festival, having them conveyed by special train. Among the participants were the representative of the government and members of the town council, all joining in hearty wishes for the prosperous and happy future of the house of Wertheim & Co.

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THE Manheim Rubber, Gutta-Percha, and Asbestos Factory has issued an elaborate catalogue of hard rubber goods, especially for electrical uses. It is in large folio size, printed in clean artistic lithography. It appears in two parts, the first of which mentions all the requirements in hard rubber for telegraph and telephone use. The second part is devoted to a variety of technical goods, and articles for chemical use. The entire work serves excellently to illustrate the wide variety of uses to which hard rubber may be put, as well as the diversity of the work done in this factory.

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THE latest balance-sheet of the Moscow Rubber Co., in Russia, shows a capital of 4000 shares of the first two issues and 3876 of the third issue, amounting altogether, in American currency, to about $984,500. They have a reserve fund amounting to $10,641, and a sinking-fund for plant of $29,396. The gross profit for 1895 was $35,746. The buildings and machinery figure in the balance-sheet as worth $531,096.

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BALATA belting is used on the dynamos and engines for driving all the machinery in the extensive coal-yards of L. Possehl & Co., Altona, Germany, for loading and unloading vessels, storing the coal, etc., and is said to have given complete satisfaction under the severest tests. The belting is manufactured by a firm in the same city.

## THE FRENCH DUNLOP TIRE CO.

THE exploiting of the Dunlop tire at the expense of the investing public has been carried into France, where Ernst Terah Hooley, one of the promoters of the $15,000,000 English Dunlop syndicate, has put the Cie. Française des Pneumatiques Dunlop on the market as a £700,000 stock concern. In French money this would read 17,500,000 francs, which sounds bigger than even the figures current in English tire circles. The success of the Dunlop tire in France, by the way, is worth recounting. The Stanley cycle-show in London, in 1890, was attended by the leading bicycle-manufacturer in France, who saw for the first time the pneumatic tire, with which he became so much impressed that he journeyed at once to Dublin to secure from Mr. du Cros the sole license for its manufacture in France. So successful was this undertaking that the licensee organized, in October, 1893, the French Dunlop Tire Co.—the French name for which has been given above—with $140,000 capital, of which $100,000 was set aside as working capital. Harvey du Cros accepted the chairmanship of this company, devoting to its development an important share of his time. The result has been that the 500-franc shares have of late been quoted at 7500 francs, and the concern started with $140,000 has been floated for $3,500,000.

The splendid factory of the company referred to is situated on the Seine, in the northwest of Paris, in the suburb of Levallois-Perret. Back of the works is the celebrated velodrome where, every Sunday, tens of thousands of spectators pay their admission fees to see the bicycle races. Nearer the heart of the city, at No. 29 Avenue de la Grand Armée, is the depôt of the company, in the center of the district devoted to the bicycle trade in Paris, in charge of an English manager, H. E. Watson. Writing of the factory the *St. James's Budget* (London) says: "What will probably interest visitors more than anything else, because of the simplicity of the processes, are the inflation and deflation of the tires simply by turning a cock on or off; the ingenious appliance by which, by means of a rapidly-revolving brush, the sulphur is removed from the India-rubber; and the machine for testing the tires. By this last-mentioned apparatus the tires are made to run at a speed of more than fifty miles an hour, over an irregular surface as much like an actual road as possible. There is also an ingenious contrivance by which the India-rubber is rendered practically inodorous. In the stockroom are many thousands of rubber strips, tubes, valves, wires, and other articles used in the making of tires and rims. All the materials are made in France, including the solution used in the building up of a tire, of which a ton can be made daily." The rendering of rubber inodorous they regard as an important achievement, because, as a matter of fact, the original Dunlop firm was turned out of Dublin by the civic authorities, and compelled to go to Coventry, on account of the smells caused by the rubber when tires were being manufactured.

The store is extensive enough to permit of 5000 tires being carried in stock, besides the fullest opportunity for displaying tires. The French Dunlop company have contracts with the leading bicycle-manufacturers in that country to supply tires, besides which the original licensee continues to make bicycles, having greatly enlarged his plant this year. It is claimed that 90 per cent. of the wheels made in France are equipped with the wired-on tires and, under recent legal decisions in that country, the Dunlop company have the sole right to manufacture such tires. The manufacture of wheels in France is now estimated to have reached the rate of 75,000 per year, and their sale, 100,000 a year. The authorities expect this year to collect the $2 tax on 322,000 bicycles.

## HOW TO ADVERTISE RUBBER FOOTWEAR.

IN boot and shoe retail advertising there is one matter always to be kept in mind,—seasonableness. Advertise just the thing that people want at that particular time. For instance, in Summer, when their are light rains, advertise low cut rubbers, croquets and footholds. In the fall advertise high cut rubbers, those with a high vamp to protect against driving rains. In the Winter when there is snow, advertise knee boots and button and buckle gaiters. Then put a few of your choicest rubbers—Candee goods, Woonsocket boots, Wales-Goodyear arctics, American Kid Fitting Specialties, high vamped Meyer shoes—on your counters and in the windows where people can see them.

## MR. WILLIAM T. BAIRD.

ONE of the youngest successful rubber men of to-day is Mr. William T. Baird, whose photograph is here reproduced. Mr. Baird has been in the rubber business for twenty-three years, taking his place Sept. 2d, 1873, as office boy in the New York Belting & Packing Co., when the offices and salesrooms were at 37 38 Park row, where the Potter building now stands. Mr. John H. Cheever, the then treasurer and Mr. Henry F. Durant, the president of the company, soon saw worth in the boy and placed him on the books. Here showing special aptitude for figures, he was advanced rapidly as those ahead of him dropped out, until in 1885 he became the cashier, and a little later on became secretary of the company, when death took the genial and popular Mr. Timothy Cronwall.

When the New York Belting & Packing Co. reorganized and the New York Belting & Packing Co., Ltd., took its place, Mr. Baird, by unanimous vote, became secretary. This was in March, 1891. Later on the formation of the Mechanical Rubber Co., Feb. 14, 1896, he became a director, and on June 5, 1896, was elected its treasurer, Mr. August Belmont retiring from that position—thus Mr. Baird takes a most responsible position, and Mr. L. K. McClymonds, the vice president and general manager, has undoubtedly shown excellent judgement in effecting this arrangement. Mr. Baird's experience and acquaintance among the financial institutions of the metropolis, especially those having business relations with the rubber trades, is large and his abilities are fully appreciated.

Mr. McClymonds is to be commended in securing such men around him as Messrs. Baird, Blanchard, George, Darling, and others of like calibre, who, together make the Mechanical Rubber Co. and the New York Belting & Packing Co., Ltd., such a force in the rubber trade.

WILLIAM T. BAIRD.

## RUBBER FOOTWEAR FOR HORSES.

THE latest novelty in the horse goods line is a horseshoe or boot made entirely of rubber, and it is the invention of the Kansas City veterinary surgeon, Dr. Joseph Hirsch. Dr. Hirsch, who is one of the leading veterinaries of the West, has made a specialty of the horse's foot, and his study of the hoof has resulted in many radical changes in the shoeing of horses. His observations have led to the introduction of many improvements that have been adopted by Kansas City's expert farriers, but the rubber shoe, which is simplicity itself, promises to make him famous where asphalt pavement is in use. This rubber shoe has many advantageous features and Dr. Hirsch claims that it is not only specially adapted for the city horse that slips and slides on the asphalt, but that it has a beneficial effect on the general health of the horse's hoof and can be used to advantage on the track, where the firm footing that it gives will produce greater speed with less strain on the horse.

Dr. Hirsch has always held that every nail that penetrates the horse's hoof deflects the hairlike tubes of which it is composed, consequently the rubber shoe, which fits the hoof like a glove, protects the foot in such a natural manner that the horn is preserved without the use of a single nail. This shoe fits over the entire hoof, being laced up in front like a shoe on the human foot, and the ground surface being heavily corrugated, prevents absolutely any slipping or sliding, even if the pavement be coated with ice or snow. The toe of the shoe is so constructed that where the heaviest wear comes it can be readily replaced. The new shoe is not yet on the market, but arrangements have been made with an Akron, O., rubber firm to manufacture them. Another advantage of the rubber shoe over the ordinary iron shoe is that it may be taken off when the animal is in the barn, giving the hoof every opportunity for rest, cooling and natural expansion, and as they can be put on or taken off in less than two minutes, the operation of shoeing works little inconvenience. The shoe has been thoroughly tested, a set of shoes worn for a month past showing but little wear. The inventor is also of the opinion that the shoe will revolutionize the shoeing of track horses, both trotters and gallopers, and predicts that they will eventually supplant the iron or steel shoe, both for racing and city use. The appearance of the invention on the foot is not at all clumsy, and as the rubber can be made to correspond nearly in color to the natural hoof, it would be scarcely noticed, excepting that the sharp metallic ring of the iron hoof on the hard asphalt or brick pavement is missing.

## CATALOGUES OF RUBBER GOODS DESIRED.

GUSTAVE NIEDERLEIN, Philadelphia consul for Costa Rica, organizing with official aid and on a solid basis closer trade relations between this country and Costa Rica, and wishes to have sent to his office 233 S. 4th street, Philadelphia, two sets of illustrated catalogues of American manufactured articles, suitable for the market of Central and South America (when published in Spanish one in that language) with detailed information about prices, terms of credit and discounts, manner of payment and custom of packing and shipping, also freight rates to the shipping point, if not delivered on board the vessel, etc.

In return Mr. Niederlein is willing to give special data on goods desired or products offered in Costa Rica (having a nearly complete collection of Costa Rican products at his disposal), or any other information desired. He will forward, if desired, special inquiries to exporters and importers in Costa Rica to be properly answered or bring the American manufacturer or importer in direct communication with the Costa Rica importer, consumer, or exporter.

THE village of Hoosick Falls, N. Y., has bought through a local firm $350 worth of 2½" rubber-lined double-jacket hose for the fire-department.

## A RUBBER-MAN ACTIVE IN POLITICS.

ONE of the busiest men in politics nowadays is Mr. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Mass.), congressman for the fourth Massachusetts district, and vice-chairman of the Republican Congressional Campaign Committee, who has been in charge lately of the committee's headquarters in Washington, in the absence of Chairman Babcock. A Boston *Globe* correspondent writes:

"Mr. Apsley works in the committee much as he would in his own factory in Hudson. To him the election of a Republican majority in the next house and incidentally a Republican president—because while the presidency comes first with most politicians, the peculiar functions of the congressional committee are to elect Republican members of the next congress—is as much a matter of business as is the manufacture of fine rubber goods. He regards the campaign as a matter of business, to be conducted on business principles. His associates have recognized his abilities in this direction, and have been content to largely leave the management of affairs in his hands.

"Mr. Apsley has his committee arranged on a business basis. He has a force of clerks employed who ship documents in the same orderly, methodical way as waterproofs and other articles are shipped from Mr. Apsley's factory. Orders for this speech or that document are entered, noted and passed over to the shipping department, and the machinery is so well organized that the business is carried on without a hitch.

"The headquarters of the committee, what might be called the executive offices, are in the Normandie hotel. Across the street in a four-story house, is the 'factory.' Here the documents are received from the printer, counted and shipped out. Some of them go in bulk packages to chairmen of state and county committees, some of them to members of congress, while others are put up in franked envelopes and sent to individual voters, according to lists which have been furnished to Mr. Apsley by chairmen of committees or candidates for congress.

"Mr. Apsley has a force of nearly 100 clerks and packers working here. He makes it his business to go across the street two or three times a day to see that everyone is kept busy and is in good humor. He has a pleasant word for all of them, and he has had experience enough in dealing with employés to know that they work all the better when their employer takes an interest in them."

## SIR HENRY DERING ON RUBBER CULTIVATION.

SIR HENRY DERING, in his report on the productions of Mexico thus describes the cultivation of India-rubber. The rubber tree is indigenous to Mexico and is found growing wild along both coasts, below 22 degrees north latitude, from sea level to altitudes running from 1200 to 1500 feet, and principally by the river meadows. Rubber is essentially a tropical tree, hence it requires a hot and moist climate. The temperature best adapted for its vigorous growth is above 86° Fahrenheit, and the rainfall should be at least 60 to 70 inches per annum. There are eight kinds of rubber trees that grow wild in the country, but the kind known under the name of *Castilloa elastica* is the most important and the best, as it is very much sought for, for its sap and for propagation. Regarding the work of extracting the rubber one man will tap from 20 to 25 trees a day if the operation is performed carefully and methodically. In most places the tapping is done in May and sometimes again in October, but it is not advisable to repeat the operation as often as that. The process generally consists in making two or three incisions in the lower part of the tree and collecting the sap that flows from them on clay vessels placed next to the trunk. The process can be repeated every year for 25 years or more especially if the wound is covered with wax or clay after the flow of the sap has ceased. When there is a large quantity of milk gathered it is placed in a barrel having a faucet and a solution of five ounces of chloride or sub-carbonate of sodium in sufficient water to cover the whole mass, which is agitated with a stick every now and then. After the lapse of 24 to 36 hours the water is allowed to run out through the faucet, this operation of washing is carried on until the rubber becomes white. About 44 per cent, of rubber remains from the original amount of milk after the water and other matters have been eliminated by evaporation. Trees planted on lands having the soil, climate, and elevation adapted for the culture will produce from 5 to 6 pounds of juice on the first year that they are tapped, which amount is equivalent to 2.4 pounds of pure rubber. This product will be gradually increased every year for the next four or five years, and sell for 50 cents per pound on the plantation. The total expense for a rubber plantation of 100,000 trees will not exceed $25,000, and as the yield of 100,000 trees will be about 240,000 pounds at the first year's harvest, this will bring the planter $120,000, besides the product obtained from the side planting. The net profit on the investment, after deducting the entire cost of the land and all expenses up to the first year of harvesting, will be $95,000, and each of the succeeding harvests for 25 or 30 years will bring a steady income of over $100,000.

## PNEUMATIC TIRES AS AN INSULATION.

BICYCLING has many advantages, and a new one due to the pneumatic tire has been brought to light by the *Scientific American*, which says: "The rider is completely insulated from the earth and consequently is impervious to the attacks of the electric fluid. Thus, day by day, it becomes more and more a fact that life without a pneumatic tire is neither safe nor worth having. Any one who suffers from nervousness during a thunder shower has now only to go into a barn or the cellar and seat himself on the saddle of a pneumatic-tired bicycle to be perfectly safe from lightning stroke. As the chances of a man on a bicycle being struck by lightning have been carefully calculated to be about one in a billion, there will, of course, be some pessimists who will deny that this newly discovered virtue of the pneumatic as a lightning insulator amounts to much."

## GERMAN GUTTA-PERCHA FUSES.

A SPECIAL Gutta-percha safety fuse, covered with white tread impregnated by a chemical composition, for protection against injury during transport and insertion in the shot-hole, thus preventing misfires, is made by Heine Carl Marx, of Harburg-Hamburg, who obtained first prizes at the Melbourne, Chicago, and San Francisco exhibitions. The burning speed of this fuse is very uniform, so that it may be timed exactly. Moreover, owing to a special method of manufacture, it gives out a strong flame longitudinally, so that it is capable of igniting the charge from a distance of 15 to 20 centimeters (mean 6¾ inches), while the minimum distance prescribed at the pyrotechnic laboratory of the Prussian army, Spandau, is one centimeter. Whereas the ordinary Gutta-percha safety fuse gives out a great deal of smoke, the Marx fuse produces very little, so that the air in the workings is less vitiated.—*Kuhlow's (Berlin)*.

## RUBBER FOOTWEAR FACTORIES.

NEW ENGLAND and New Jersey claim by far the larger part of the rubber footwear factories of this country. The big American Rubber Company's factory is situated at Cambridgeport, just across the Charles river from Boston; the Woonsocket factories and the National Rubber Company's factory are in Rhode Island; the big Candee factory and the great Wales-Goodyear plant are in Connecticut, the first at New Haven and the other at Naugatuck; while the Meyer, Jersey and New Brunswick factories are in New Jersey. But there is one very important rubber boot and shoe factory that is situated in Pennsylvania, the Lycoming Rubber Co. at Williamsport. It is a comparatively new-comer in this field, having been started in the early eighties, whereas some of the other companies date back to the early forties; but the Lycoming Rubber Co. has taken a position in the front rank of the rubber footwear industry. Its output is increasing from year to year. It has become particularly famous for its Lumbermen's shoes, especially its Girard, and also for its very fine, dressy light shoes for city trade. The Lycoming Rubber Co. probably makes the slenderest and narrowest-toed rubbers on the market to-day. It has a very large trade in the west, and also finds an excellent market among the enterprising buyers of the east. The treasurer of the company, Mr. S. N. Williams, is one of the best known business men in Northern Pennsylvania. It is owing largely to his marked executive ability that the Lycoming Company has come so rapidly to the front.

## SULPHUR PRICES MAY BE HIGHER.

NOTHING has been heard of late of the project to develop certain sulphur deposits in the United States, in the expectation that, by the use of new methods in mining, the price of this commodity would be lowered. On the other hand, news comes from Italy, the present chief source of the world's supply of sulphur, of the formation of a sulphur trust, as a means of remedying the crisis which for some time past has depressed the industry in Sicily. The Anglo-Italian Sulphur Co. is the name of an enterprise promoted by the Baron Oppenheimer, a Parisian banker; Commander Florio, of the Florio Steamship Co., of Palermo, Italy; and Alexander Maccomb Chance, of Birmingham, England. The amount of capital named is $5,000,000. The intention has been to complete the organization of the company so soon as the producers of four-fifths of the Sicilian output of sulphur shall have signed an agreement to sell their product exclusively to the company, and to consent to a decrease of production whenever the output shall exceed the demand. The producers are guaranteed by the company, for the term of five years, for brimstone, best seconds unmixed, aboard at Sicilian ports, a fixed price equivalent (at present rates of exchange) to $15.94 per ton, the same material having sold recently as low as $13.11. In the case of the abolition, or the reduction of the Italian export tax (which is at present about $1.98) to 18 cents per ton, which is being argued in the Italian parliament, and confidently expected to be passed, the producers are also to receive this benefit of $1.80 per ton.

## MORE RUBBER-TIRED VEHICLES.

PNEUMATIC-TIRED wheels have been placed on the ambulances of the Long Island College Hospital, in Brooklyn, and if they prove satisfactory after a three months's trial the other ambulances in Brooklyn will be similarly equipped. Commenting upon this action, *The Journal* (New York) says that it "will do more for the comfort and ultimate recovery of those who meet with accidents requiring their removal to the hospital than would a dozen cases of surgical instruments, or a carload of books on the best methods of slashing the human body."

The list of rubber-tired ambulances has been increased by one lately added by Bellevue Hospital in New York city, and one for the two hospitals at Yonkers, N. Y. These tires are of the solid rubber variety. In the latter case they were paid for from a fund raised by the firemen. The Presbyterian Hospital, in New York, now has two pneumatic-tired ambulances in use, and has ordered a third.

This is from the New York *Sun*: "Here was something that was quite new to me," said a stroller, "a noiseless truck; a truck with rubber-tired wheels. It belonged to a manufacturer or dealer in rubber tires. I caught only a glimpse of the signboard on the side of it, and so it was natural enough that it should have rubber tires, but a truck with rubber-tired wheels was very striking all the same. Suppose all trucks had rubber tires?"

Experimenters are very busy with different forms of horseless wagons, all of which will require rubber tires, though little practical success has been attained as yet in the use of vehicles of this class.

## A GLANCE BACKWARD.

TO THE EDITOR OF THE INDIA RUBBER WORLD: As one peruses the pages of your valuable journal the figures and statistics given from time to time are not the least interesting of the good material furnished so lavishly to your readers. The writer has come across some data compiled in the early fifties by Thomas Hancock, "the Goodyear of England," as you are pleased to call him in a recent issue. Judging from the interest shown in the early history of the rubber business, it is thought that some of Hancock's figures, in a condensed form, might not be unacceptable to your readers.

From his tables it appears that the total exports from Pará from 1836 to 1856 were, of native shoes, 4,741,275 pairs, and of rubber, 34,133,195 pounds. Of these amounts the United States were the largest importers, taking in shoes 3,886,534 pairs, and of rubber 18,652,279 pounds. Germany follows as a second on shoes with 321,165 pairs and only 834,507 pounds of rubber, while England takes the second place on rubber with 11,696,550 pounds, but only 139,775 pairs of shoes. The smallest export of shoes was to Barcelona, 19 pairs, and the smallest export of rubber was to Barbadoes, 32 pounds. Salem, Mass., seems to have been very much in the business as she is credited with 1,792,548 pairs of shoes, her largest year being from 1841 to 1842 when she received 239,115 pairs. The last importation of native shoes into the United States seems to have been from 1853 to 1854. These tables contain many other facts from which many interesting deductions might be made. A. M. S.

Medford, Mass., August 3, 1896.

## THE RUBBER AUTHORITY IN ITALY ALSO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I should esteem it a favor if you would forward me the number of your journal containing an article upon the pipe in Gutta-percha for water service. ARTURO BARRONCINI, C. E.

Catanzaro, Italy, July 15, 1896.

## ARE RUBBER CARRIAGE-TIRES TOO DEAR?

COST seems to be the fundamental objection to the more rapid extension of the use of rubber tires on pleasure vehicles. Dealers in many instances, think the slow growth of use of rubber-tired vehicles is more or less due to the fact that manufacturers charge more for such equipment than they could get along with, and that they would sell more if they charged less for such tires. Concerning the merits of this contention we are not informed. The impression may exist among manufacturers that people who want rubber tires on vehicles must and will pay big prices for them. Users of vehicles take another view. They are satisfied with iron tires, and they feel they must be induced to change. The initiative belongs to the manufacturer, not to the customer. The manufacturer must press and argue and induce. As to the cost feature of the matter, no doubt builders feel they must be reimbursed for the risk taken in fathering a novelty. Doubtless they feel like charging not only for the rubber and the risk involved in introducing the new tire, but also they may feel like charging something for the comfort the softer tire brings.

Another fact which tends to sustain prices is that but few individual carriage-builders can afford to put on rubber tires in competition with the larger wholesale manufacturers, who with better facilities and heavier production can place rubber-tired vehicles on the market at lower prices. Hence competition is restricted from this cause. Then again, rubber tires are at present used only on certain classes of pleasure vehicles, and only those who have trade in these classes can expect to sell vehicles so tired. Still another fact may be mentioned, viz.: the increasing demand for rubber forbids any hope of a marked decline in tires.

Apart from all these considerations, we are standing face to face with that ever present inertia of the human mind to resist improvement, even after demonstration and experience and use have removed every reasonable obstacle and objection to the general adoption of a given improvement. The mind is indolent, instinctively conservative, and it waits until an impulse assumes overwhelming proportions. Look at the long years the bicycle begged for recognition. Before we are aware of it the world will be on rubber tires. Its use is bound to become as general for pleasure carriage purposes as it is now restricted. If the manufacturers can do anything to stimulate this movement by eliminating unnecessary features of cost (if there are any to eliminate) it would doubtless be to their advantage to take counsel in the matter.—*Carriage Monthly.*

## THE DRYING AND SEASONING OF RUBBER.

IT has happened many scores of times in the rubber business, as well as in all others, that rules that the pioneers in the trade religiously observed have been ultimately found to be useless or cumbersome. It is possible that this applies to no less important a matter than that of drying and seasoning the better grades of crude rubber. To-day manufacturers who make the finer classes of rubber goods are very proud of the fact that they allow their Pará rubber to air-dry for weeks, months, and sometimes for a full year before use. The argument advanced is that the seasoning in some way enhances the quality of the gum and makes it far more valuable. An agnostic in the rubber business, who is the successful superintendent of a factory noted for the fine quality of its goods, attacked this theory about a year ago. He reasoned that the quicker the rubber could be dried the better, and the whole basis of his faith in quick drying and a lack of seasoning, was the very patent fact that a crude rubber surface exposed to air for any length of time becomes oxidized; carried to an extreme, this oxidation results in a hard, brittle, scale, that is absolutely devoid of elasticity. He therefore held that the freer the crude rubber was of the oxidation by air, the tougher and more lasting would the vulcanized gum be. After looking about in the various industries where the problem of drying is much more complex than in the rubber business, he discovered a dryer that exactly suited his purpose and that apparently extracted every particle of moisture from the gum in a very few hours. Gum thus dried he put on the mills, mixed, calendered and made up into goods at once. These goods were carefully tested with similar goods made of seasoned gum, and according to his report were by far the better of the two. Since then quick drying and no seasoning has been his policy, and in no way has the reputation of his concern suffered.

## THE TIRE-REPAIRING QUESTION.

THIS year a novelty has been introduced in the principal cities, including Denver, says the *Republican*, of that place. Two of the principal rubber-tire manufacturing companies have established agencies there and will repair all of their tires free of charge, replacing such as cannot be repaired. A third company, one of the largest in the world, is just about to open such an agency. Another company has an agent in Denver, who is also a bicycle-dealer. He repairs free any tires sold on his wheels, and will replace any defective tires. A representative of still another concern was in the city a few days ago, going there for the express purpose of opening such an agency. He is in doubt, however, and probably will delay this opening until next season. He says that he has made a tour of all the repair-shops and finds them almost unanimously against the innovation. They say that it destroys their business, as one of the principal sources of income to a repair-shop is that derived from mending tires. The agent says that the men are taking an unwarranted stand, as it is to the best interests of cycling that it should be introduced, and that such objections have never been raised in eastern cities. His agents, however, have asked him to delay the change, saying that, while it might prove directly to their benefit, it is against the interests of the numerous repair men, so he will, in all probability, take no action at present. The repair question is growing to be an important one, and probably it will not be long before a conference of repair-men will be held, at which rates and guarantees will be adjusted on some regular plan.

## OBITUARY.

CAPTAIN DAVID T. JOHNSON, for fifty years a resident of Ansonia, Conn., and a prominent builder there for twenty-five years, died in that city on July 20, aged 74. He was the father of Charles L. Johnson, of New York, who is director of sales of the United States Rubber Co., and secretary of the Candee Rubber Co. of New Haven. Captain Johnson recruited Company F, Twenty-third Connecticut Volunteers, in the civil war, and was first lieutenant of the company. He leaves a handsome fortune. His winters were spent in the South for the last fifteen years, and for years he managed a large hotel at Aiken, S. C. He leaves five sons and one daughter.

A NEW narrow tread pneumatic tire, that can describe an eight-foot circle on an asphalt pavement without slipping has recently been brought out in London. The secret of this is said to be due to very slow vulcanization.

## TRADE AND PERSONAL NOTES.

THE General Electric Co. are to be included in the list of rubber-manufacturers, on account of their extensive use of India-rubber in the insulation of wires at their works in Schenectady, N. Y. Their catalogue embraces a wide range of rubber-insulated wire.

=The New Brunswick Rubber Co., Limited, is the name of the new concern at St. John, N. B., based upon the patents controlled by George R. Davis and T. H. C. Miles, for the manufacture of non-slippable rubber footwear, of which mention was made in THE INDIA RUBBER WORLD for June. The St. John *Telegraph* announces that the company have secured substantial privileges from that city and that the factory will be in operation shortly.

=It is interesting to know in spite of the fact that the general sales of rubber boots have fallen off during the past few years that Parker's leather soled rubber boot has steadily increased its sales year by year. These boots are manufactured by John H. Parker, Boston.

=Samuel Kidder, dealer in rubber goods and mill supplies was recently sold out by the sheriff at 60 Federal street, Boston. It is said that he will pay from fifty to sixty cents on the dollar.

=Mr. E. L. Toy, the treasurer and general manager of the Diamond Rubber Co., Akron, Ohio, was a recent caller at the office of THE INDIA RUBBER WORLD.

=Mr. E. H. Paine, selling agent of the United States Rubber Co., New York, has been spending some time at the club house of the Adirondack Fish and Game League, the privilege having been secured to him through the courtesy of Mr. W. S. Ballou, who is a member of the league.

=Chester J. Pike, selling agent of the United States Rubber Co., Boston, Mass., takes his summer vacation in fragments, spending two or three days at his beautiful home in Medford, Mass., a little time at Castle Harmony, in Maine, with perhaps a run to lake Winnepesaukee for an outing of a day or two.

=The Boston Rubber Co.'s factory at Chelsea, Mass., is being run with about seventy-five employees to fill orders, and to work up the stock now on hand. It is said however that it will soon be closed permanently.

=The Fred J. Myers Mfg. Co., Hamilton, Ohio, are out with the Blue Grass Detachable Tire, which is said to be one of the easiest to put on or take off that has yet been invented.

=The B. F. Goodrich Co., Akron, O., are out with a new repair tool called the "Jiffy" which is said to be the neatest, most compact, and altogether desirable of any yet produced.

=The India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited (Silvertown), have entered into a contract with the government of Chile to lay a submarine cable from Puerto Montt, in the southern part of that country, to Punto Arenas, in the straits of Magellan—a distance of about 1200 miles. This line is expected to be of great service to navigation in that difficult and dangerous region.

=Pres. H. D. Warren of the Gutta-percha & Rubber Mfg., Co. (Toronto, Canada) was a recent visitor to New York where he spent nearly a week.

=Mr. S. H. C. Miner, Pres. of the Granby Rubber Co., (Granby, Quebec), is at present spending several weeks at the shore in the vicinity of Boston.

=Mr. Geo. H. Virtue, of the firm of Spinney, Virtue & Co., (Lynn, Mass.), has withdrawn from that firm and at present is handling a line of mill supplies.

=The North British Rubber Co., Limited (Edinburgh), are erecting a large additional factory for the manufacture of the "Clincher" tires—which they will make hereafter under license from the Dunlop Pneumatic Tyre Co., Limited. It is stated that a sum of no less than $500,000 is to be expended on the buildings and machinery.

=An automatic tire repairer has been placed on the market by the Century Chemical Co., Cleveland, Ohio.

=A vertical belt air compressor for use in inflating bicycle tires has been brought out by the Clayton Air Compressor Works, New York, and is having a large sale among tire manufacturers, repair men and others.

=A silver trophy valued at $250 is offered by the Boston *Journal* to the bicycle-tire manufacturer whose tire shall score the greatest number of points during the race meet of the Press Cycling Club on September 7, at Charles River Park.

=The L. Candee & Co. (New Haven, Conn.) on July 23 posted a notice to their employés of a three-weeks' shutdown, dating from Saturday, August 1.

=The stock and fixtures of the E. Read Goodridge Manufacturing Co. (Newport, R. I.) were sold by the sheriff on July 10, to satisfy judgments in favor of Daniel Leroy Dresser and others, to the extent of $171,000, as detailed in THE INDIA RUBBER WORLD for June. The machinery and fixtures went for $45,000, to Mr. Dresser. He was also the highest bidder for the material and manufactured goods on hand, which brought $5000. It is understood that if Mr. Dresser can secure enough local capital, he will operate the mill himself, in default of which he would remove the machinery to New York. In any event the orders for elastic webbing on hand will be filled. Edward F. O'Brien, one of the bidders at the sale, is reported to represent several persons interested in rubber-manufacture, who may yet conclude to relieve Mr. Dresser of his purchase and continue the operation of the plant, with Mr. O'Brien in charge.

=The injunction suit against the Akron India Rubber Co., recently organized at Akron, Ohio, by John F. Seiberling, to restrain them from the use of a corporate title similar to some of the names applied in business to the B. F. Goodrich Co., has been decided in favor of the latter concern. Judge Nye holds that the use of the names "Akron India Rubber Co.," "Akron India Rubber Works," or "Akron Rubber Works" by the Seiberling company would tend to create confusion and result in damage to the business of the older establishment. For this reason the temporary injunction secured by the latter was made perpetual, but notice was immediately served by counsel for the new company of intention to appeal to a higher court.

=Mr. C. J. Bailey, Boston's rubber specialty man, has given to Leeming, Miles & Co., of Montreal, the agency for his brushes and other rubber goods.

=L. C. Chase & Co., selling agents of the Reading Rubber Mfg. Co., are out with a very handsome pneumatic tire, known as the Chase tire, which they are making in Reading, Mass.

=A very pleasant letter from H. D. Morris & Co., of San Francisco, says that they are the agents of the Manhattan Rubber Mfg. Co., of New York, and would be glad if THE INDIA RUBBER WORLD should notify the trade to that effect, which we hereby very gladly do.

=Lester Leland, treasurer of the Boston Rubber Shoe Co., is an enthusiastic golfist, and has lately made some very good scores at the links of the Essex County Club.

=The L. Candee Co. (New Haven, Conn.) have a new steam boiler which is the second largest in the world. It is 36 feet high, 15 feet in diameter, and weighs complete, 165,950 pounds.

=The retail rubber store of Joseph H. McCaughey at Pawtucket, R. I., has been closed by the sheriff, on a suit in favor of Clarence A. Hayward, the former proprietor.

=The World Mfg. Co. (80 Reade street, New York) who have pushed the Superb Smalley wheels so successfully this season, ask THE INDIA RUBBER WORLD to inform the trade that Bass & McDonald, the successors of the Plymouth Cycle Mfg. Co., expect to push the Smalley wheel on a larger scale than ever before, and that the high standard of manufacture will in no way be lessened.

=Dr. Hugo Grab, of M. Grab Söhne, Prague, Austria, large manufacturers of table, stair and shelf oil cloth, is in this country investigating the manufacture of rubber carriage cloth.

=The Atlantic Rubber Co. has been organized at Portland, Me., for the purpose of manufacturing bicycle tires and other rubber products. The officers are Henry J. Doughty, Providence, R. I., president; Frank E. Tingley, Pawtucket, R. I., treasurer.

=Selz, Schwab & Co., an important shoe-jobbing firm in Chicago, already large handlers of rubber footwear, have lately organized a rubber department, with a view to giving more attention to this line. In addition to the Woonsocket goods, which they have kept in stock hitherto, they will also handle the Wales Goodyear rubbers.

=The annual meeting of stockholders of the Eastern Rubber Manufacturing Co. (Trenton, N. J.) was held on July 2, when the following directors were elected: G. D. W. Vroom, Frank A. Magowan, William H. Skirm, Allan Magowan, William H. Servis, and Samuel Walker, Jr. The officers were then re-elected, as follows: Frank A. Magowan, president; William H. Skirm, treasurer; and William H. Servis, secretary and assistant-treasurer.

=H. H. Shepard, general selling-agent of the National India Rubber Co., has removed his headquarters from Providence to the offices of the company at Bristol, R. I.

=The factory of the Tyer Rubber Co. (Andover, Mass.) resumed work on July 6, the employés having been out for a vacation of a week or more.

=Treasurer George P. Eustis, of the Boston Rubber Co., has made this return, under the corporation laws of Massachusetts: *Assets*—Land, water-power, and buildings, $157,974; machinery, $166,848; cash and debts receivable, $150,670; manufactures and merchandise, $434,912; miscellaneous, $7000; total, $917,417. *Liabilities*—Capital stock, $300,000; debts, $600,110; reserve for depreciation, $17,306; total, $917,417.

=Oliver, Straus & Co. (No. 23 Park row, New York) are a new copartnership firm, composed of Edwin Oliver, Alexander Straus, and S. A. Harms, organized to absorb the business of the Manufacturers' Cycle Supply Co. and Edwin Oliver & Co., late dealers in bicycles at the address above given. Mr. Straus is the well-known tire-manufacturer, lately in charge of the Newton Rubber Works.

=An inventory of the personal estate of the late John F. Holt, who was a director in the Woonsocket Rubber Co., was filed in the probate court at Woonsocket, R. I., on July 24, amounting to $483,144.55. The larger part of the estate consists of stock in the United States Rubber Co.—3257 shares of preferred, listed at $86 per share, and 200 shares of common, rated at $26, the whole aggregating $285,302. The prices at which the stocks were quoted on the same date on the New York Stock Exchange would yield a smaller amount than that named above by about $54,000.

=The Peoria Rubber & Mfg. Co. (Peoria, Ill.) are offering high grade wheels for a short time only at $42 and $32 each.

=Since the opening of the rubber-shoe factory of George Watkinson & Co. in Philadelphia there are citizens of Bristol, R. I., disposed to criticise the local authorities for failing last year to offer sufficiently liberal inducements to secure the location of the factory in that town. At one time Mr. Watkinson negotiated for the purchase of the plant of the defunct Providence Shade Roller Co., at Bristol, in the hope of receiving some inducement from the town to establish a rubber factory there, but without satisfactory results.

=Work was resumed on July 6 by the Newton Rubber Works (Upper Newton Falls, Mass.), after a shutdown of two weeks. It is stated that the orders in hand give promise of a busy season.

=Two Japanese gentlemen arrived lately in the United States to secure exhibits of all kinds of merchandise manufactured here, for the commercial museum at Osaka, which is to be a government institution in the nature of a permanent industrial exposition. Among other things, "India-rubber wares" are specified in their announcement of goods desired. Catalogues of American manufactures will be welcomed, if addressed "Osaka Commercial Museum, Osaka, Japan."

=J. E. Rhoades & Sons (Philadelphia) are doing most satisfactory business in the sale of spraying apparatus.

=The city of Pittsburgh has awarded a contract for lead-covered underground wires for the police and fire service, amounting to $31,950, which is several thousand dollars less than the bid of any company on rubber-insulated wires. The same contractors secured a contract for this work several months ago, involving the use of rubber insulation, for $38,101, but after the city authorities had listened to arguments in behalf of lead-covered wires, new bids were called for, with the result above mentioned. The wires will be furnished by the Standard Underground Cable Co. (Pittsburgh.)

=The Standard Rubber Corporation (Campello, Mass.) have been advertising in the Boston newspapers for mackintosh-stitchers, promising steady work throughout the season.

=The B. F. Goodrich Co., proprietors of the Akron Rubber Works (Akron, Ohio), have increased their capital stock from $1,500,000 to $2,000,000. In a letter to THE INDIA RUBBER WORLD the secretary of the corporation states that the object is to provide additional working capital, made necessary not by extension of any particular branch of their business, but by its steady growth in all departments.

=Mr. F. W. Dunbar, Pará agent for Adelbert H. Alden, is in the United States enjoying a summer vacation. Two years of steady work at Pará rather told on Mr. Dunbar, but the comparatively cool weather up here is helping him wonderfully.

=The Davidson Rubber Co. (East Somerville, Mass.) have closed their factory for the annual two weeks of rest and repair. This repairing, by the way, they do very thoroughly, taking all the machinery apart, even to the engine, and carefully cleaning it and replacing worn parts. This plan of an annual overhauling has proved very satisfactory in its effects.

=The amount of rubber scrap collected from the garbage-dumps in New York city is reported to be smaller than in former years, probably owing to the fact that the value of this item of waste is becoming more generally known, so that more people are interested in preventing it from reaching the dumps. An estimate from an intelligent source places the collection of old rubbers at the dumps at about 75 tons per year, whereas it was shown, in an article published in THE INDIA RUBBER WORLD last year, that the total collections in the city amount to 500 tons or more per year.

=At a recent meeting of the executive committee of the United States Rubber Co., it was voted to dispense with the services of stock-transfer agents on and after August 1. The company will transfer their own stock hereafter, instead of passing it through the hands of H. B. Hollins & Co., as formerly. It is understood that this action has been taken as a measure of economy.

=Mr. Theodore Studley, who retires this month from his long connection with the Goodyear Rubber Co., in New York, will take the agency for the Parfumerie Lubin—manufacturers of "Lubin's Extract"—for the United States and Canada.

=The Wales-Goodyear Rubber Co. (Naugatuck, Conn.), who are in the midst of their annual shutdown, are reported to have in hand orders for 60,000 cases of rubber shoes.

=The Foster Shoe and Rubber Co. (Philadelphia) on July 31 confessed judgment for $50,000, and an execution was issued for that amount. Counsel for the company says the trouble was caused through an attachment issued two days ago by a Massachusetts firm, wnich precipitated other demands.

=The Neponsett Rubber Co. (Hyde Park, Mass.), manufacturers of rubber garments, suffered a loss by fire on August 1, estimated at $5000, which is only partially covered by insurance. The loss on the building, owned by other parties, was $5000.

=The Munden-Hildesheimer-Gummiwarren- Fabriken- Grebrueder-Wetzell-Actiengesellschaft, a German corporation, have brought a suit in the New York city court to recover $699.13 against Carl P. Stern and Amos Lyon for rubber balls supplied to the defendants. The defendants allege that the balls were not salable, and that they could not dispose of them. The case will not be tried until October.

=A three weeks' shutdown of the two factories of the Boston Rubber Shoe Co. began on August 8.

=During the shutdown of the Lambertville (N. J.) Rubber Co. a new 200 horse-power boiler is being placed in the engine-room, which, together with the two 150 horse-power boilers already in use, will give the works a capacity of 500 horse-power.

=The Sussex Tire Co., of Poughkeepsie, N. Y., have been incorporated to manufacture rubber tires and other mechanical rubber goods. The capital is stated at $5000, and the directors are A. H. Gleason, C. H. Broas, and C. A. Stewart, all of New York city.

=Reports continue to appear in local newspapers with regard to the establishment of a new rubber factory by the Messrs. Hood at Watertown, Mass. The Watertown *Gazette* of July 24 stated that ground for the factory had been broken by F. C. Hood, while the Franklin (Mass.) *Sentinel* states that Charles I. Dean, formerly employed as a pattern-maker by the Boston Rubber Co., had been engaged for similar work for the factory at Watertown.

=At last accounts there was still a vacancy in the list of directors of the United States Rubber Co. owing to the declination of Joseph Banigan to serve.

=Mr. Jefferson Young has accepted a position as salesman for the World Mfg. Co. (New York), and will handle rubber goods and specialties in the states of New York and Pennsylvania.

=The factories of the United States Rubber Co. at New Brunswick, N. J., and Milltown, N. J., are in the midst of a three weeks' shutdown, dating from the 6th of August.

=Every member of the order of Elks at Syracuse, N. Y., is a bicyclist, and they all have their wheels equipped with Hodgman single-tube tires. The Hodgman representative in that district, A. R. Wilson, is a popular Elk.

=Mr. Charles H. Dale, president of the Peerless Rubber Manufacturing Co., New York, spends three days a week during the heated term at Larchmont, N. Y.

=President Harrall of the Fairfield Rubber Co. (Fairfield, Conn.) is doing an exceedingly good business in some of the high grades of carriage cloth that are specialties in his line of manufacture.

=E. C. Stearns & Co. (Chicago) have rented half of the Ames building, in Omaha, and will put in a stock of rubber footwear.

=Wilson, Haight & Co., rubber-goods dealers in Des Moines, Iowa, have given a bill of sale to the Duck Brand Rubber Co., to cancel a chattel mortgage.

=The Peoria Rubber and Manufacturing Co. (Peoria, Ill.), who broke ground for their plant so recently as September, 1895, have since completed their regular factory buildings, built their own water-works, built two miles of railroad track to afford transportation facilities, and erected several cottages for operatives. Meanwhile they have manufactured 30,000 pairs of "Peoria" single-tube bicycle-tires, and, by the end of July, had completed 10,000 bicycles. They intend making 5000 more bicycles this season, and are planning to increase their capacity to 40,000. Five hundred hands are employed. They have received an order for 100 bicycles for shipment to Rotterdam.

=In another column will be found an advertisement giving in detail the machinery, etc., of a factory that is equipped for the hard rubber business, which is now offered for sale. This factory, so the owner writes, would be suitable for the manufacture of druggists' sundries, bicycle tires, or specialties. The plant is that of the former Brown Comb Co., Wappingers Falls, N. Y.

=Mr. J. F. Ives, formerly with the Mechanical Rubber Co., Cleveland, Ohio, has taken charge of the tire department of the B. F. Goodrich Co., Akron, Ohio. Mr. Ives enjoys the distinction of being the first salesman employed by the Goodrich company in the interest of their tires, and although but a short time in his new position is already doing good work.

=Mr. Ernest L. Baldwin, who for a number of years has been a successful salesman of mechanical rubber goods, and for the last two years has had charge of the mechanical department of the Columbia Rubber Works Co., New York, has opened an office at 63 Reade street, New York, where he will carry a fullline of mechanical rubber goods, carriage cloth and tires, which are the manufacture of the Empire Rubber Manufacturing Co. of Trenton, N. J. This office will be the only distributing point for the Empire Co.'s goods in New York city, and with the friends that Mr. Baldwin has in the general trade, and the good reputation that Mr. George R. Cook, Treasurer and General Manager of the Empire, has secured for their goods, there is no doubt but what the venture will be a profitable one.

=It is, perhaps, generally known in the rubber trade that P. & S. C. White, of New York, furnish about seven-tenths of the sulphur that is used in rubber manufacture in the United States. It will, therefore, interest the trade to know that this company is just in receipt of a bronze medal, the only one given to an exhibitor of this grade of sulphur at the World's Fair in 1893.

=A typographical error in the July INDIA RUBBER WORLD made it appear that the Davidson Rubber Co. (Boston) instead of being large manufacturers of patent safety nipples, only had a very ordinary output. Instead of 1200 gross per year it should have read 12,000 gross. In other words, the difference between 172,800 nipples, and 1,728,000.

=Mr. Bussweiler, of Symington, Bussweiler & Co., of Liverpool, is at the present time in the United States visiting George A. Alden, and the New York Commercial Co.

# REVIEW OF THE INDIA RUBBER MARKET.

THE month just closed has been one of general dullness in the crude-rubber trade. Since our last publication there has been a gradual dragging down of prices, rather than changes due to varying conditions of supply and demand. Prices of fine Pará are still about 18 per cent. higher than at the same period one year ago, while no corresponding advance has been made by rubber-manufacturers, as a rule, in the prices of their goods. On the contrary, there are lines of products for which, on account of the keen competition to make sales, lower prices are quoted than at any time in the past. Under such circumstances it is natural that consumers of crude rubber should be extremely conservative in buying, and that the smallest possible amounts should be taken when replenishment of their stocks can no longer be deferred.

These remarks apply more particularly to the United States. There appears to be no doubt that the British and Continental rubber-factories are relatively better supplied with business of late than those on this side the ocean. Even where lower dividends have been declared by some of the foreign companies this year, the announcement has been made that it has not been on account of any reduction in the volume of business. Official statistics show larger imports of crude rubber this year than usual for most of the European consuming countries, and it is a fact of interest that an exceptionally large amount of Pará rubber has been exported from New York of late. Generally the movement of Pará rubber across the Atlantic is in the other direction.

The latest quotations in the New York market are:

| PARÁ. | | |
|---|---|---|
| Islands, fine, new | 80 | @81 |
| Islands, fine, old | none here | |
| Islands, coarse, new | 42 | @42½ |
| Islands, coarse, old | none here | |
| Upriver, fine, new | 85 | @86 |
| Upriver, fine, old | 87 | @88 |
| Upriver, coarse, new | 55 | @56 |
| Upriver, coarse, old | none here | |
| Caucho (Peruvian) sheet | 40 | @ |
| Caucho (Peruvian) strip | 44 | @45 |
| Caucho (Peruvian) ball | 50 | @51 |
| **CENTRALS.** | | |
| Esmeralda, sausage | 48 | @49 |
| Guayaquil, strip | 33 | @39 |
| Nicaragua, scrap | 46 | @46½ |
| Nicaragua, sheet | none here | |
| Mangabeira, sheet | 40 | @43 |
| **AFRICAN.** | | |
| Thimbles | 34 | @35 |
| Tongues | 38 | @39 |
| Sierra Leone | 35 | @52 |
| Benguela | 47 | @48 |
| Congo Ball | 39 | @41 |
| Cameroon Ball | 38 | @39 |
| Flake and Lumps | 25 | @26 |
| Accra Flake | 18 | @20 |
| Accra Buttons | 47 | @48 |
| Accra Strips | 51 | @53 |
| Lagos Buttons | 42 | @43 |
| Lagos Strips | 43 | @44 |
| Liberian Flake | 30 | @ |
| Madagascar, pinky | 58 | @60 |
| Madagascar, black | 42 | @43 |
| Mozambique, red ball | | @ |
| Mozambique, white ball | | @ |
| **EAST INDIAN.** | | |
| Assam | 42 | @56 |
| Borneo | 26 | @41 |
| **GUTTA-PERCHA.** | | |
| Fine grade | | 1.30 |
| Medium | | 1.00 |
| Hard white | | 85 |
| Lower sorts | | |
| Balata | | |

Late Pará cables quote:

| | Per Kilo. | | Per Kilo. |
|---|---|---|---|
| Islands, fine | 6 $600 | Upriver, fine | 7 $350 |
| Islands, coarse | 3 $100 | Upriver, coarse | 4 $650 |

Exchange 9 1/16 *d*

NEW YORK PRICES FOR JULY (ISLANDS RUBBER).

| | 1896. | | 1895. | | 1894. | |
|---|---|---|---|---|---|---|
| | Fine. | Coarse. | Fine. | Coarse. | Fine. | Coarse. |
| First | 82 | 46 | 72 | 47½ | 66 | 44½ |
| Highest | 85 | 47 | 72 | 47½ | 66 | 44½ |
| Lowest | 81 | 43 | 70 | 46 | 65 | 42 |
| Last | 81 | 43 | 71 | 46 | 65 | 42 |

In regard to the financial situation, Albert B. Beers, broker in India-rubber and commercial paper (No. 58 William street, New York), advises us as follows: "During the early part of July there was a fair demand for rubber paper, the best names being taken at 5 @ 5½ per cent., but since the middle of the month, nearly all the banks have stopped buying, and what little paper has been taken has been at higher rates, viz.: 6 @ 7 per cent. for prime single- and double- names, but the demand is very small even for this class, and paper not so well known is practically unsalable."

The statistical position of Pará rubber in New York and elsewhere is as follows—figures expressing tons of 1000 kilograms:

| | Fine and Medium. | Coarse. | Totals. | Totals. 1895. | Totals. 1894. |
|---|---|---|---|---|---|
| Stock, June 30 | 205 | 84 = | 289 | 366 | 1159 |
| Arrivals, July | 128 | 125 = | 253 | 193 | 266 |
| Aggregating | 333 | 209 = | 542 | 559 | 1425 |
| Deliveries, July | 173 | 122 = | 295 | 248 | 337 |
| Stock, July 31 | 160 | 87 = | 247 | 311 | 1088 |

| | 1896. | 1895. | 1894. |
|---|---|---|---|
| Stock in England, July 31 | 1045 | 1065 | 1255 |
| Deliveries in England, July | 480 | 390 | 400 |
| Pará receipts, July | 910 | 960 | 680 |
| Stocks in Pará, July 31 | 240 | 285 | 100 |
| World's supply July 31 (excluding Caucho) | 1967 | 2374 | 3061 |
| Pará receipts since July 1 | 910 | 960 | 680 |

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## THE RUBBER SITUATION AT PARA.

AT the end of the crop year, after a period of comparative quiet in the market at Pará, there became noticeable an improved inquiry for rubber, in consequence of which all entries upon arrival passed promptly into shipper's hands. Prices were thus fully maintained, and, in fact, they improved. Of upriver sorts there was no arrivals toward the end of the year, and therefore no opportunity to test the market. Since the date referred to entries have been light, as compared with the demand for rubber. The situation toward the end of July was that the demand had remained active while the supplies continued on a small scale, and a keen competition was kept up among shippers, with the result that values were fully maintained. At the close of the month, however, the market became less spirited, with a tendency toward the modification of prices. Mail advices from R. F. Sears & Co. report the following prices at Pará under the several dates mentioned, in the American currency equivalent for the local quotations per pound:

| | June 18. | June 28. | July 8. | July 18. |
|---|---|---|---|---|
| Islands, fine | 70c. | 71¾c. | 73½c. | 73¾c. |
| Islands, coarse | 34½c. | 35¾c. | 38½c. | 39c. |
| Upriver, fine | 77½c. | 78¼c. | 79½c. | 79½c. |
| Upriver, coarse | 50¼c. | 50¾c. | 52¾c. | 52½c. |

These prices are *f. o. b.*, not including shrinkage, freight, and insurance. The tendency of exchange has been downward

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THERE'S a curious fact to be noticed about the footwear of motormen on the cars in New York and other large cities. The constant pounding of the foot on the gong wears out a leather sole in a very short time, while the rubber sole will stand the thumping for an indefinite time.

* * *

A fourteen-year-old poet has been discovered working in a rubber factory at Silverton in Devonshire, England. His name is Edmund Curtis. A philanthropic gentleman has taken him from his work and undertaken to educate him for three years and probably take out his poetry.—*New York Sun.*